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ABSTRACT

The first paper aims to give a certain relativity to the significance of education and to indicate the limitations of any educational effort. The thinking underlying the current approach to the economic development of native communities and reserves is discussed as well as the implications and consequences of such thinking. It is argued that the success of any educational effort depends on the overall employment situation at the level of the reserve or at any level for that matter. Utilizing the concept of a "natural resource system", which combines the analysis of ecological, economic, and social variables into a coherent framework, the second article delineates the process that changed wild rice from a subsistence staple crop to what will be a heavily capitalized agricultural industry. It is shown that the Indians, who were the original exploiters of this natural resource, have lost more and more of their control over the economic activity, and that this diminishing control is not due to any cultural inabilities on the part of the Indians. Rather it is shown that the Euro-Americans have assumed more and more control over wild rice because of the vast financial institutions which have encouraged this development, from the Hudson's Bay Company in earlier days to major food industries today. It is argued that the "developments" in the wild rice industry are in fact detrimental to the interests of the Indian population, and that the changes in this industry in effect contribute to the development of underdevelopment on Indian reserves. (AUTHOR/NQ)

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Series 5: Occasional Papers Nos. 5 and 6

Two Papers on Canadian Indians

Education and Economic Development:
The Case of Indian Reserves in Canada
by Paul Deprez

The Capitalization of a Traditional
Pursuit: The Case of Wild Rice in
Manitoba
by Y.G. Lithman

Center for
Settlement Studies

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EDUCATION AND ECONOMIC DEVELOPMENT: THE CASE OF INDIAN RESERVES IN CANADA

by

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Paper given at the Sixth Annual Meeting
of the
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The author assumes full responsibility for inconsistencies and errors.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES	vii
INTRODUCTION	1
THE CURRENT APPROACH TO THE ECONOMIC PROBLEMS OF THE INDIANS	1
THE IMPLICATIONS AND CONSEQUENCES OF SUCH THINKING	10
AN EMPIRICAL ANALYSIS	16
CONCLUSION	28
FOOTNOTES	37

p. iv blank

LIST OF TABLES

		Page
TABLE 1	EDUCATIONAL LEVELS OF BAND POPULATIONS .	18
TABLE 2	EMPLOYMENT STATUS ACCORDING TO EDUCATIONAL LEVEL (GRADE COMPLETED) INDIAN POPULATION ON RESERVE	22
TABLE 3	EMPLOYMENT STATUS ACCORDING TO EDUCATIONAL LEVEL (GRADE COMPLETED) INDIAN POPULATION OFF RESERVE	23

p. vi blank

INTRODUCTION

Most of the discussion dealing with the role of education in the economic development of native communities in Canada, and reserves in particular, has been carried out by people specialized in the field of education. Seldom, however, have economists been heard.

This paper expresses the personal views of the author, who has written two studies on economic problems as they pertain to native peoples and more particularly to treaty Indians. It is aimed at giving a certain relativity to the significance of education and at indicating the limitations of any educational effort.

No such discussion can be carried out, however, without some insight into the thinking underlying the current approach to the economic development of native communities and reserves.

THE CURRENT APPROACH TO THE ECONOMIC PROBLEMS OF THE INDIANS

For clarity, we will first briefly summarize the points we will try to make relative to current approaches to the economic problems of the Indians.

First, while education is considered a necessary condition for economic development, economic development itself, once it is achieved, is considered to be a

condition for further social and cultural ends. Secondly, clear preference emerges in favor of training the Indians for a limited range of occupations. Finally, a third point we will try to make is that the various educational and social adjustment programs, as applied to the Indians, tend to go much further than similar programs run in less developed countries: the upshot of this is that these programs have tended to become more abstract and less aimed at immediate and urgent problems.

An example of the thinking that underlies the traditional approach to the problems of development facing the Indians can be found in Chapter II of the first part of the Hawthorn Report, commissioned by the Department of Indian Affairs and Northern Development in 1964 and published in 1966.[1]

That chapter deals with the concept and goals of economic development as they relate to the treaty Indians. The author starts off by pointing out that there is a real danger that in the urbanized and industrialized economy the majority of the Indians, as well as a small minority of whites may become socially isolated, unemployed or under-employed, and increasingly dependent upon society. It is in that light that one can begin to understand the development programs that have been initiated for Indians. By speaking about "programs" the author of the report implies that the problem will have to be tackled on different fronts: economic as well as educational, social, and cultural.

Immediately following the above statement, the report points out that economic development is not an end in itself, but should be seen as an "essential means to other ends."[2] The following quotation should be viewed as a complement to the previous statement:

> This is not to say, however, that economic development is or should be the key or primary goal in any program for Indians or that it is separate and distinct from other aspects of social life. On the contrary, as this study will emphasize, there is every evidence to indicate that the economic development of Indians depends not only on what have traditionally been viewed as economic factors, but on a variety of political, educational, social and cultural variables. Substantial change and progress in these latter aspects may, indeed, be needed before any substantial economic development can be achieved.[3]

We are faced here with a dual approach: first of all, a number of prerequisites have to be fulfilled before one can expect results in the field of economic development; secondly, once these adjustments have been made and there is some evidence of economic achievement, this achievement is seen as a vehicle for other goals, which are not necessarily economic. The point is in fact made that planners and government officials should at all times be aware of the fact that economic achievements are in turn a prerequisite for other noneconomic achievements.

We will, for the time being, concentrate on the problems of social, cultural, and educational adjustment of the Indians to the requirements, norms, and values of

the dominant white society, because these adjustment problems are an important element in the thinking underlying the approach to the economic problems of the Indians.

The Hawthorn Report goes on to state that: "The broad ultimate goal that the Indian Affairs Branch holds on behalf of Indians in Canada is in one major respect similar to that of the advanced nations in relation to the developing countries -- that is, a long-range program of balanced economic and social development to approach equality in levels of material well-being and welfare between the two groups."[4] Between this quotation and the previous one there is a very subtle difference. While the latter speaks of balanced development, the former states that social development may be a necessary precondition for economic development, which is not exactly the same, as a somewhat higher priority is given to social development. It is also pointed out that there is a growing gap between the skills the Indians have acquired and the skills normally required in an industrial economy. As a result of this dichotomy it will become increasingly difficult for the Indian, because of his lack of adequate skills, to find jobs in the industrial economy.[5] At the same time, the fact that the Indian does not take part in the industrial economy has resulted in sharp differences between his life style and the life style prevalent in an industrial setting. The implication is clear: in order to help the Indian bridge these gaps, he must undergo a double process of adjustment, an economic-skill adjustment and a social or life-style

adjustment.

The Hawthorn Report comes out in favor of specialization in training and employment, admitting that diversity may be more desirable in the long run, while guarding against a too narrow approach in the matter of specialization. This choice of emphasis is illustrated by the following quotation:

> Should the main expenditures of money, time and effort be devoted to training and encouraging Indians to specialize in certain occupations for which they have special capacities and preferences, for which openings are most easily available, and which offer the prospects of adequate, though limited, returns in money and status which would yield highest average per capita real income in the foreseeable future? Or should the major effort be devoted to encouraging all Indians as individuals to develop to their full capacities, aspiring to a wide range of occupations that differ widely in education, skill and personality requirements, and that offer widely unequal returns in income and status and, on the average, perhaps lower per capita incomes than would the first pattern? In brief, should the main emphasis be placed on encouraging diversity rather than specialization in the role that Indians are to be trained and encouraged to play in the economy?[6]

The report also warns that industrialization may create a number of social problems when it is "introduced or superimposed by one cultural group upon another."[7] However, the report has to admit that: "The most serious social problems today seem to be occuring [*sic*] on the most massive scale in those regions or countries in

which economic development is failing to occur rapidly enough to meet the needs and aspirations of rapidly growing populations."[8] In other words, there will also be social problems when economic development is *not* introduced or superimposed.

An important point should be made here. The Hawthorn Report does not discuss whether the characteristics which seem to generate in the less developed countries, the most serious social problems and discontent resulting from underdevelopment, also occur on the reserves. In other words we don't know, unless assumed, whether exposure to "Western" civilization and standard of living and to the differences in educational levels will generate or has generated serious problems.

The Report clearly stresses the impact of education on development: it is pointed out that rising standards of education of the labor force have accounted for a good deal of the increased productivity in industrialized countries.[9] This statement again is qualified in the following way:

> An educational program that stressed ancient virtues, or the classical values of an aristocratic elite, might generate contempt for manual work, technical expertise, and business enterprise of the very kinds that an underdeveloped people most need to advance economically.[10]

If we understand the author correctly, education is a necessary requirement for economic development because it will enable the Indian to achieve higher productivity.

Immediately, however, certain constraints are imposed so as to limit the content of education to a specific range of economic activities.

It is also in the light of the social, cultural, and educational adjustment that one has to see the philosophy underlying the NewStart Programs (such as the ones in Alberta, Manitoba, and Saskatchewan) and the different community development programs. The NewStart projects have all attempted to launch life-skill programs whose aim is to provide social adjustment for developing individual competence in specific areas: self-concept and interpersonal relations, home and family life, leisure time usage, community rights and responsibilities, and finally employment.[11] Such a program aims at helping people who are at a disadvantage in obtaining training or employment or who have problems in keeping a job.

Community development aims mainly at the same goals; it attempts to educate the population of a community on how to work together towards common goals and to assist them in developing the competence and knowledge to make best use of existing facilities. In their employment aspect the life-skills programs aim at increasing the ability of the individual to locate jobs or training, to obtain and hold a job; at improving his relations with others in his job; and finally at increasing his sense of responsibility. As one can see, most of the goals are still within the framework of an adjustment program prior to any involvement in a nontraditional economic setting.

The community development programs are a transplant of programs launched in underdeveloped countries. In these countries community development is seen as a means to fight "poverty, ignorance and disease."[12] An examination of such programs in various underdeveloped countries reveals that they aim at providing basic education, at establishing local health services, and at improving the food supply. It is also hoped that these programs will uncover natural leaders, at the level of the community, who will be active in each of the various problem areas.[13] The scope and aims of the community development programs in the Canadian-Indian setting are not different from the goals outlined above.[14] The rationale for the adoption of community development programs was the existence of a specific type of culture facing the Indians, namely a culture of poverty. With respect to Manitoba, Jean Lagasse started from the Oscar Lewis concept that a culture of poverty is "both an adaptation and a reaction of the poor to their marginal position in a class stratified, highly individuated, capitalistic society."[15] Lagasse found substantiation of that concept in his findings relating to Manitoba: un- and under-employment; inadequate housing and bad sanitary and health conditions at the community level; and racial discrimination, helplessness, inferiority, and apathy at the individual level.

At this point there appears to be a divergence between the original approach and its Canadian adaptation. While in the underdeveloped countries community development programs are used to remedy immediate problems,

the program in Canada is more concerned with less tangible and more abstract problems, putting the problems of economic development in the background and emphasizing the human development aspect. The following quotation from the 1966 *Annual Report* of the Manitoba Department of Welfare makes this clear: "Community Development is a process of involving people in the basic democratic process of decision-making whether it pertains to economic development, social development, change in attitudes, change in traditional methods of doing things, environmental change, what have you."[16]

A number of economic projects that were initiated, not only in Manitoba but practically everywhere in Canada, were seen as means to get such a process of involvement started; handicraft guilds and co-operatives were seen as the most appropriate of these means. Their strict economic dimension was in fact considered to be of less importance than their significance for human development.

The underlying philosophy of community development as practised in Canada is that there is such a cultural gap between whites and Indians, such a lack of knowledge of the white society, that a long conditioning of the Indians is necessary in order to bring them into the economic framework of the dominant white society. What in fact is happening here is that the broad approach experimented with in underdeveloped countries has been applied to the Canadian situation, but instead of applying it to immediate problems, a course has been taken in which primary stress is placed on the cultural gap, and

a secondary role is given to the economic dimensions of the problem.

Out of the previous paragraphs the following leitmotiv clearly emerges: social and educational development has to precede economic development. It is clear that we are faced here with what we have termed elsewhere[17] a bottleneck conception at the base of which lies the assumption that the lack of "proper" education pervades all aspects of the Indian problem. In other words, advance in the field of education is considered to be a prerequisite for success in all other directions and in all other aspects of development; it is, therefore, a necessary condition for progress.

THE IMPLICATIONS AND CONSEQUENCES OF SUCH THINKING

The fact that education is seen as a necessary condition for further economic development brings us back to the whole concept of the "residual factor" in economic growth. Although we do not want to enter into a lengthy discussion of the "residue," a brief reminder may be in order here because it deals with the whole problem of investment in human capital.

For this review we have followed rather closely *The Economic Value of Education* by T. W. Schultz,[18] which is a good summary of the thesis that education is in fact the critical variable indispensable for economic development.

The benefits of education are considered to be felt in three specific areas: present consumption, future consumption, and future producer capability. Of the three, most weight is given to the future producer capability; while this theory implies that education is considered to be a major source of economic growth, it also requires that the benefits of education be large. It is assumed not only that increased education will have a positive effect on productivity levels, but also that increased research and technology resulting from an educational effort will be a contribution to economic growth. The following quotation will clarify this thesis even more:

> To clariy some general relations between schooling and economic growth, let us assume for sake of convenience that all schooling is an investment in earnings, that the rate of return is the same to each level whether it is elementary or a higher level of schooling, and that the number of workers remains constant. Under these simplifying assumptions, if the capital stock of schooling per worker were not to rise, schooling would not be a source of economic growth.
>
> Once a country attains a high level of schooling, although it would undoubtedly require much schooling to maintain it and the annual investment in schooling would be large, schooling would obviously no longer be a source of economic growth. Also, however low the level, unless it is raised, schooling is not a source of growth. Yet, starting from a low level, there are large possibilities for raising it.
>
> If the level were raised substantially and rapidly, then during such a period schooling would be a substantial source of growth. Also, under these assumptions, adding a year of high school per worker increases the capital stock of schooling in the labour force much more than

> adding a year of elementary schooling. . . . All of these relationships are based on what happens to the capital stock of schooling per worker. Once the assumption with respect to the constancy of the size of the labour force is relaxed, then even if per-worker schooling were to remain unchanged, any increase in the labour force would increase the total capital stock of schooling and to this extent it would become a source of economic growth.[19]

It is also assumed that the differences in the amounts invested in human capital will, over the long run, result in a[illegible] account for differences in wages, with the implication that the higher the investment the higher the wages or at least the larger the difference between the initial wage and the wage earned as a result of an increased investment in education.

H. Myint has made some very pertinent criticisms of this thesis,[20] distinguishing between the passive and active role of education. The passive role of education can be defined as an attempt to supply different types of skilled manpower which will be required by a given pattern and rate of economic growth; the active role on the other hand is an attempt to transform the existing structure in order to accelerate the rate of economic growth. In other words, the active role will deal specifically with technological innovations and the transformation of the existing productive structure, and will produce or attempt to produce people capable of realizing these changes.

According to Myint the passive role of education is seriously limited by the fact that it is an attempt

to supply the manpower required by a *given* pattern of economic growth, with emphasis on the word "given." It assumes that it is possible to project the number of people with a specific qualification that will be required by a given pattern and rate of economic growth. It also assumes gaps in the qualitative distribution of manpower, which is something that no one will dispute for the under-developed countries, but which will become extremely relevant for the topic under discussion here.

The main criticism regarding the active role of education deals with its aim to produce people who will be able to undertake and to direct the transformation of a given traditional productive system: in other words, it hopes to produce leaders who will break down the existing social and cultural rigidities which prevent both social change and economic development. Myint cautions that we may in fact overestimate these rigidities and take for apathy or conservatism an attitude that merely reflects a sense of disillusionment and inadequacy in the face of proposed changes. The whole idea behind Myint's criticism is that while education indeed plays a significant role in economic development, that role must not be carried too far and certainly must not be overestimated.

When projecting the current thinking outlined in Part 2 against the thesis that education accounts for most of the "residual" in economic growth, and against the criticism offered by Myint, then a number of points emerge that require further explanation.

In the thinking underlying both the Hawthorn Report and the community development approach, the assumption is that over the years a lag has developed between the Indians and the dominant white society, resulting in the stagnation (economic as well as social and cultural) of Indian society. The attempts to draw a parallel between development problems in Canada and similar problems in underdeveloped countries have led to the belief that educational and social development are preconditions for economic development. But none of the approaches outlined in Part 1 stop there. They go even further and maintain that while education and social development are to be considered steps in the adjustment process leading to economic development, the latter is in turn another phase in the adjustment process of which the final goals are not clearly defined.

While few economists will maintain that economic development is strictly an end in itself, no one will pretend that it is only or essentially a means to other ends. But what has happened with respect to the Indians is that the "end" aspect of economic development has been pushed into the background. A number of ventures were undertaken, the strict economic aspect of which was not given the attention nor the significance it deserved.[21] In other words, the whole concept of education being an important contribution to the explanation of the "residual" has been carried further than it was initially intended.

Some of the general criticism brought forward by

Myint are directly applicable to the Canadian situation.

Let us first of all go back to the distinction between the active and passive roles of education. It must be stated in all fairness that the dual role of education has been recognized by people dealing with Indian problems; while that recognition was never expressed in a direct way, it is reasonable to say that it was intuitively accepted. Otherwise one could not see any rationale for the particular and specific characteristics of the community development approach, which is to involve people in a process of democratic decision-making with the ultimate goal of generating community leaders. But here we come to the question of what type of leaders will emerge.

In the context of the reserves, the active role will consist of selective borrowings of existing techniques from the white society. In other terms, the political leaders do not need to have technological qualifications; the crucial skills may in fact be both political and organizational. In that case the traditional form of education will not necessarily achieve the goals set by the active role.

Hence, we can only expect tangible and significant economic results from the passive role of education. In its passive role education will attempt to supply the manpower required by a given pattern and rate of economic growth: in other words, through education one will attempt to integrate Indians into a given economic system

to the extend that that pattern and rate of economic growth require. But implicit in that way of reasoning is the assumption that there are gaps in manpower and in the occupational distribution of the manpower.

This, however, is questionable within the framework of an industrial economy because different types of gaps can exist both horizontally and vertically. If horizontally, then there will be gaps in different sectors, and hence education and training may aim at meeting an increased demand in particular sectors; because of increased rigidities of given sectors, however, the training may result in an increased supply making it more difficult for the trainees to enter the labor market. If gaps exist in the vertical direction, then they will exist either at the top of the hierarchy or at the bottom. If they are at the top they are out of reach for the Indians, and if they are at the bottom they may be in the low-income bracket, requiring a low degree of specialization and hence not requiring a high level of education.

AN EMPIRICAL ANALYSIS

In making an empirical analysis we will test the overall significance of education for economic development of the Indians, as well as the validity of some of the criticisms brought forward by Myint.

In the Hawthorn Report[22] a "case" for increased education as a significant factor in economic development was made on the basis of a positive correlation found

between the level of education (higher than Grade IX) and per capita real income.

Even a superficial glance at the data (see Table 1) reproduced from the Hawthorn Report[23] indicates that there is a disproportionate representation in favor of the bands of Ontario, Quebec, and British Columbia, which arouses some suspicion. A correlation of only two variables across bands in widely different environments and scattered over Canada has surely little or no power of test.

One should also realize that the Hawthorn Report suggests a causal relationship between education and per capita income, which is not necessarily true, as the coefficients of correlation only measure the strength of a given relationship, without saying anything about its causal relationship.

In order to check further the validity of the statement made in the report we broke the table up into two parts; we grouped on one side all bands of Ontario, Alberta, and British Columbia and on the other all the remaining ones. The choice of the first group was dictated by the fact that the three provinces comprising that group were the ones with the highest real personal incomes per capita in 1966.[24] For the seventeen bands of that group the average per capita real income was $356, and the average percentage of people having an education higher than Grade IX was 2.71. The correlation between the real income and the educational level turned

TABLE 1

EDUCATIONAL LEVELS OF BAND POPULATIONS

Band	Location	Per Capita Income	Per Cent Aged 16 and over in School	Per Cent of Population Educate past Grade IX
Chaughnawaga	Que.	793	3.45	4.7
Walpole Island	Ont.	715	3.92	2.9
Sheshaht	B.C.	664	3.95	3.6
Lorette	Que.	630	4.24	7.0
Squamish	B.C.	630	3.36	3.9
Tyendinaga	Ont.	516	3.89	2.4
Curve Lake	Ont.	350	6.78	2.2
Six Nations	Ont.	350	7.63	2.8
Mistassini	Que.	341	3.20	2.2
Port Simpson	B.C.	325	3.20	2.9
Kamloops	B.C.	314	2.87	1.9
Sarcee	Alta.	302	5.48	1.6
Fort William	Ont.	298	5.35	3.8
Williams Lake	B.C.	291	6.10	7.1
Moose Factory	Ont.	284	4.71	1.8
River Desert	Que.	250	2.90	1.8
St. Mary's	B.C.	249	4.28	3.4
Attawapiskat	Ont.	247	3.27	2.1
Pointe Bleue	Que.	222	6.12	5.3

TABLE 1 (CONT'D.)

EDUCATIONAL LEVELS OF BAND POPULATIONS

Band	Location	Per Capita Income	Per Cent Aged 16 and over in School	Per Cent of Population Educated past Grade IX
Tobique	N.B.	215	7.66	3.5
Pikangikum	Ont.	197	.88	0
Shubenacadie	N.S.	180	3.24	.8
Rupert House	Que.	174	4.51	1.8
Cold Lake	Alta.	165	2.78	3.7
Fort St. John	B.C.	161	.73	0
The Pas	Man.	140	1.79	0
James Smith	Sask.	126	5.40	3.1
Peguis	Man.	99	2.25	4.0
Big Cove	N.B.	61	3.25	1.3
Coefficient of Correlation with Per Capita Income			.002	.47

Note: The following reserves were deleted from the original table because no data regarding education were available for them: Dog Rib Rea (N.W.T.), Fort Alexander and Oak River (Man.), Deer Lake (Ont.), Piapot (Sask.), Skidegate (B.C.), and Masset (B.C.). The column indicating location was added to the original table.

out to be very disappointing: r = 0.269, where a significance level of .1 requires a coefficient of 0.388.

For the second group, comprising twelve bands, the average income was $269, and the average percentage of persons with more than Grade IX education was 2.96. For this group the correlation was thus stronger, although still only moderately significant: r = 0.609, with significance level of close to .02.

The first observation is that while there is a substantial difference in per capita real income between the two groups (32.3 per cent), the difference between the educational levels is much smaller (9.2 per cent), and the educational levels are higher in the group with the lowest per capita income. These differences, taken in conjunction with the correlation coefficients, would tend to indicate that in Ontario, Alberta, and British Columbia the higher per capita income is not necessarily a function of higher education, but may well be a function of the overall economic situation of the province in which the bands are located.

In other words, there is a probability that higher income is attained in this region regardless of education. The second observation is that while it was argued in the Hawthorn Report that higher educational levels were in fact a necessary condition for higher levels of achievement and higher levels of income, one could also argue that a higher level of economic development will in fact generate a demand for higher levels of education. The

minimal difference between the two groups in the average percentages of persons with more than a Grade IX education could, however, carry us a little further, and a case could be made for the fact that higher education will remain under-utilized when the economic climate of the area in which the reserves are located creates no demand for people with a higher education.

We have also tried to establish whether there is any relationship between the levels of education and the employment status; in other words, we have tried to measure to what extent the level of education will have an influence on whether the persons will be unemployed, seasonally or partially, or fully employed. We have carried out such an analysis for eleven bands in Manitoba and have made a distinction between persons living on or off the reserve.

Tables 2 and 3 give the data, respectively, for the population on and off reserves, on which we have based our analysis. We have given a particular value to each of the different employment statuses, as follows:

a) 1 for unemployed,
b) 3 for seasonally or partially employed, and
c) 5 for fully employed.

We first calculated the correlation between the employed status and the level of education, starting with Grade I. Our samples include 775 Indians on reserve and 188 off reserve.

TABLE 2

EMPLOYMENT STATUS ACCORDING TO EDUCATIONAL LEVEL

(GRADE COMPLETED)

INDIAN POPULATION ON RESERVE

Grade Completed	Unemployed	Partially or Seasonally Employed	Fully Employed	Total
1	95	10	70	175
2	10	1	5	16
3	19	6	5	30
4	19	6	6	31
5	46	10	19	75
6	69	8	28	105
7	73	9	40	122
8	51	11	52	114
9	25	4	10	39
10	21	1	23	45
11	7	3	4	14
12	1	-	6	7
13	-	-	2	2
14	-	-	-	-
15	-	-	-	-

Notes: The following notes also apply to Table 3.

1. For each year of education past Grade XII we have added 1 to 12. Hence one year of University completed will result in a grade level of 13.

2. The table deals with the following bands in Manitoba: Skownan-Waterhen, Pine Creek, Norway House, Lake Manitoba, Peguis, The Pas-Big Eddy, Cross Lake, Moose Lake, Nelson House, Jack-Head, and Little Saskatchewan.

TABLE 3

EMPLOYMENT STATUS ACCORDING TO EDUCATIONAL LEVEL
(GRADE COMPLETED)
INDIAN POPULATION OFF RESERVE

Grade Completed	Unemployed	Partially or Seasonally Employed	Fully Employed	Total
1	6	2	15	23
2	-	-	1	1
3	-	-	3	3
4	2	7	3	12
5	1	2	13	16
6	4	12	8	24
7	4	6	18	28
8	3	6	25	34
9	5	2	5	12
10	1	1	14	16
11	1	1	11	13
12	2	0	3	5
13	-	-	-	-
14	-	-	-	-
15	-	-	1	1

The coefficients of correlation (r) are:

a) for people on reserve, 0.6731 and
b) for people off reserve, 0.4230.

Both coefficients are extremely significant, having a significance of less than 0.001.

In other words, there is a very clear indication that the likelihood that an Indian will achieve full employment status with a higher level of education is less for the ones off than for the ones on the reserve.

As a next step we can calculate a similar correlation for the Indians having an education of Grade IX and more; the reason for that step is to compare our results with the results tabulated in the Hawthorn Report. (See Table 1.) Our sample covered 107 Indians on reserve and 47 off reserve; the coefficients of correlation are 0.2942 (on reserve) and 0.2057 (off reserve). While the coefficient for the Indians on reserve is highly significant (significance level lower than .01), the one for the people off reserve has a very low significance level (higher than .1).

The difference between the two coefficients of correlation may, however, be an indication that the people on reserve enjoy a better employment status as a result of a higher degree of education.

The higher correlation for the people on reserve,

as compared to the people off reserve, may seem like an anomaly in the light of the fact that on the reserve more traditional employment (hunting, trapping, fishing, logging) and low-skill employment (such as general labor) opportunities are prevalent, while the number of employment opportunities is also more limited. Moreover, the types of employment opportunities just mentioned are not presumed to require a high level of education. Therefore, in any reserve with substantial traditional economic activity and a qualitatively limited labor market, any relationship between education and employment status could in fact reflect an under-utilization of the educational skills. Another possibility is that there may not be a link between education and employment status, but the opposite, namely, that people with a better employment status consider a higher educational level a means to improve their economic status. Besides that, and some of the results that follow may tend to so indicate, there may be a distinct possibility that the employment status will also act as an incentive for higher educational levels.

Results of a study dealing with seven reserves in the Maritimes offer some substantiation for the points just made.[25] It was observed that children of Indian parents working full time had higher educational aspirations than the children of parents who were only seasonally employed or unemployed. The employment status of the parents was also significant for the educational aspirations of the children: the higher the status, the higher the aspirations.

A similar conclusion was reached on the basis of observations made by the writer at Berens River, Manitoba, in 1969. The best educational records were achieved by children whose parents (especially the father) were either fully employed or who were, in their particular occupation, good performers. On a more limited scale the same findings emerged from a follow-up on Indians working for a pre-fabricated-home plant in Brandon, Manitoba. The school records and the interest in education of the children of the Indians working in that plant started to improve shortly after their fathers became fully employed.

This brings us to the point where we can make the following statement: the success of any educational effort will depend on the overall employment situation at the level of the reserve or at any level for that matter.

Turning to a possible correlation between the average level of vocational training in each band and the percentage of fully employed in each band, one observes the absence of any correlation. This analysis was carried out for eleven bands in Manitoba, and the coefficients of correlation are, respectively, 0.1682 (formal education and full employment) and 0.1634 (vocational training and full employment). An analysis for the same bands also reveals that there is no significant correlation between formal education and vocational training ($r = 0.382$ with a significance level higher than .1). If further research confirms these observations, then one would have to conclude that formal education,

vocational training, and full employment at the level of the band are totally independent variables. This would mean that without economic development and, more in particular, without an improved employment situation, both formal education and vocational training are of very limited significance and that any educational effort will not yield any substantial results without a previous economic effort.

An analysis of the occupational distribution of the Saskatchewan Indian labor force reinforces the above statement. The 1967 labor force survey was carried out for approximately 50 per cent of the Saskatchewan Indian labor force on reserve. The most striking observation is that 86.76 per cent of the surveyed labor force is concentrated in seven main occupations:

		Per Cent
1.	Carpenter's helper	9.06
2.	Domestic	7.08
3.	Construction and general laborer	43.78
4.	Farm laborer	20.39
5.	Truck driver	3.03
6.	Pulp/paper worker	2.07
7.	Heavy equipment operator	1.35

We have compared the 1967 results with those of the 1970 Manpower Survey for Saskatchewan. The main observation is that there is no basic difference between the structures of the labor force in the two years and

that the same occupations mentioned above are still prevailing.

There is, however, one significant difference: the average education increased from Grade VI to Grade VII. In other words, in terms of structure of the labor force nothing has changed in spite of an increase in the average level of education.

CONCLUSION

Let us now try to place these empirical observations in a theoretical context.

G. S. Becker in his book on human capital[26] has worked out a theoretical approach to the effects of investments in human capital on earnings. A discussion of his approach, of the assumptions underlying his formulas, and of the limitations of such an approach is imperative before we can place our empirical observations in that theoretical frame. The main reason for dragging in Becker's equations is that they are in fact a key element in the whole argument of the role of education in the explanation of the "residual"; indirectly they also underlie the argument that Hawthorn makes in favor of education as a necessary condition for economic development and more specifically as a necessary condition for increased personal income.

Becker assumes that for a profit-maximizing firm, in a perfectly competitive output market, there will be

an equilibrium when the value of the marginal product of labor equals the wage rate[27] or

$$VMP = W. \qquad (1)$$

On the basis of that equation he goes on to construct a more elaborate set of equations.

He goes on to assume that, when taking into account different periods (0, 1, 2, . . . n), the value of the marginal product and the wages of the periods 1, 2, . . . n will be independent from the VMP and W in period 0 (the initial period). It could therefore be assumed that workers will have unique VMP and W in each of the periods, "which are, respectively, the maximum productivity in all possible uses and the market wage rate."[28] Hence for each period t following, equilibrium situation would exist:

$$VMP_t = W_t. \qquad (2)$$

The equilibrium conditions are altered when one takes into account on-the-job training. We want to state here that later we will discuss the aspect of general training.

The on-the-job training will in fact create a link between the expenditures and receipts in an initial period and in any future period, because a firm will provide training in the hope of lowering the expenditures or in the hope of raising the receipts.

Becker goes on:

> Expenditures during each period need not equal wages, receipts need not equal the maximum possible

marginal productivity and expenditures and receipts during all periods would be interrelated. The set of equilibrium conditions summarized in equation (2) would be replaced by an equality between present values of receipts and expenditures. If E_t and R_t represent expenditures and receipts during period t, and i the market discount rate, then the equilibrium condition can be written as

$$\sum_{t=0}^{n-1} \frac{R_t}{(1+i)^{t+1}} = \sum_{t=0}^{n-1} \frac{E_t}{(1+i)^{t+1}} \qquad (3)$$

when n represents the number of periods, and R_t and E_t depend on all other receipts and expenditures.

If training were given only during the initial period, expenditures during the initial period would equal the wages plus the outlay on training, expenditures during the other periods would equal wages alone, and receipts during all periods would equal marginal products.[29]

It goes without saying that when Becker mentions marginal product he means, of course, the value of the marginal product.

Equation (3) becomes then

$$MP_o + \sum_{t=1}^{n} \frac{MP_t}{(1+i)^t} = W_o + k + \sum_{t=1}^{n} \frac{W_t}{(1+i)^t}[30] \qquad (4)$$

in which k represents the actual outlay on training.

In a subsequent step Becker has tried to measure the total excess of future receipts over future expenditures, termed as G:

$$G = \sum_{t=1}^{n} \frac{MP_t - W_t.}{(1 + i)^t} \quad (5)$$ [31]

Once the new term G is defined, Becker rewrites equation (4) as follows:

$$MP_o + G = W_o + k. \quad (6)$$

In other words, the sum of the value of the marginal product of labor in the initial period and of the total excess of the value of marginal product of labor over the wage rate in each of the different subsequent periods will equal the sum of the wage rate in the initial period and of the total outlay on training.

Before going any further we first have to have a look at the applicability of that formula to general training, in other words to training which can be used in different employment situations not necessarily limited to a specific firm.

Becker has assumed, quite rightly so, that firms will only be willing to provide general training under the following conditions: that the training is at no cost for the firm.[32] In that case there are two possibilities. First, the trainees can pay for their training, either directly or indirectly through a cut in their wages, because the training will increase their future wages. Secondly, the government can pay for the trainees by means of subsidization. But since both the value of the marginal product of labor and the wages will rise by the

same amount, MP must equal W for all periods, and therefore G will be equal to zero. Hence equation (6) will be reduced to

$$MP_o = W_o + k. \qquad (7)$$

The same theoretical approach used by Becker with regard to training at the level of the firm can also be used with respect to any training program undertaken by the government.

If at present the value of the marginal product of labor equals the present wage rate, then society ought to be willing to undertake expenditures in training up to the increase in the value of output over time. For from that point onward we have to be very conscious of the limitations inherent in Becker's approach. First of all the use of the value of the marginal product of labor implies that there is a marginal physical product, but unless the trainee finds a job the marginal physical product is not relevant. For the unemployed the marginal physical product will become relevant from the moment he is hired to work. In other words, employment, under whatever circumstances, is necessary to make the marginal physical product relevant.

The expression MP (or value of the marginal product of labor) used by Becker deals with the value of the marginal physical product of the last person employed, but while it serves as a constraint on the last person employed it does not necessarily have any bearing on the last person. In other words, both equations (6) and (7)

put forward by Becker are not applicable to the unemployed because they imply full employment.

If at a particular wage rate W the labor supply exceeds the demand, then the value of the training received by the unemployed cannot be calculated with the help of Becker's equations unless the trainee obtains employment. The reason is quite simple. For the permanently unemployed trainee the marginal physical product is nonexistent. Because it is nonexistent the value of human capital of the wage rate W can be zero, although not when he is receiving welfare payments or unemployment insurance. In that case, however, no value of marginal product of labor will result from it, which means that in that case, W will in fact become an added cost.

As most training undertaken by government is general training, G will equal zero. Hence, as MP and G will be zero, there will only be one or two positive terms left in the equations (6) and (7): W_o as welfare or unemployment insurance payments and k as the actual outlay on training. This means that k, which was intended to be the key variable for increasing productivity, becomes in fact a sunk cost.

In summing up, one can say that while Becker's formula stands for the segment of the trainees entering an employment situation, it is totally irrelevant for the unemployed segment. But, as the quotient of wages divided by the price of a commodity is a key element in the determination of the marginal physical product (on

the assumption that the demand for labor stays constant), then the wages and the changes in wages resulting from training will have an impact on the results yielded by the application of Becker's equations. In an equilibrium situation we will have the following: the lower the wages, the smaller the marginal product. An increased demand for labor (as compared to an increased supply) will, however, exert a lifting pressure upon the wages. The result will be that, under the conditions of an increased supply of labor which will undoubtedly occur in the Indian population (given the actual population structure and the actual level of fertility), the relative value of k will increase and that hence the cost of training will be increased in a relative way. Only an increased demand for labor can offset such a tendency.

Going back now to our empirical data, one can make the following observations. First of all, our data indicate that the educational efforts influence the economic situation of the Indians. There are, on the contrary, indications that the employment status and changes in that status may have a beneficial impact on the results of the educational efforts. Hence, such an observation brings into question the validity of the traditional approach to the economic problems of the Indians who saw education as a necessary but not sufficient prerequisite. In other words, some of the assumptions that were made with respect to the underdeveloped countries do not hold for the Indians. Hence, the whole philosophy that educational, social, and cultural adjustments are necessary in order to bring about meaningful economic development is not entirely valid because our data have indicated that they are by no

means sufficient.

On the other hand, our observations indicate that higher income and possible higher levels of education depend on regional differences in real wages and in the demand for people with a higher level of education. Our data show also that on the reserves no such demand is generated because of the particular occupational distribution of the labor force. The same data indicate that most of the occupations available on the reserves are low-income jobs. In the light of the previous theoretical exposé, this will tend to increase the relative costs of education or to make any investment in education pointless because there is no backing up in the field of economic development. In other words, three basic things are lacking which are essential for any economic development. First of all, if it is true that higher provincial wage levels have an effect on the wage levels on the reserves, then the economic integration of the reserves in the economic activity of the province has to be increased. Secondly, if education has to yield the results one expects or hopes for, then any educational effort has to be paired with an effort in the field of economic development. Thirdly, if one wants to maximize the economic returns on educational efforts, then employment opportunities have to be created that will tend to maximize the wages of the trainees or of the people with a given educational level.

p. 36 blank

FOOTNOTES

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[2]*Ibid.*, Vol. 1, p. 21.

[3]*Ibid.*, p. 22.

[4]*Ibid.*, p. 22.

[5]*Ibid.*, p. 22.

[6]*Ibid.*, p. 27.

[7]*Ibid.*, p. 28.

[8]*Ibid.*, p. 28.

[9]*Ibid.*, p. 29.

[10]*Ibid.*, p. 29.

[11]*Social and Human Resource Development Program*, Saskatchewan NewStart, Prince Albert, 1970, p. ii.

[12]*Study Kit on Training for Community Development*, United Nations, 1957, p. 4.

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[22] Hawthorn, *A Survey*, Vol. 1, pp. 102-3.

[23] *Ibid.*, Table XIV, p. 103.

[24] *National Accounts, Income and Expenditure*, 1966, Dominion Bureau of Statistics, p. 37.

[25] J. G. Elliott, *Educational and Occupational Aspirations and Expectations: A Comparative Study of Indian and Non-Indian Youth*, Extension Dept., St. Francis Xavier University, 1970, pp. 35-37.

[26] G. Becker, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, New York: National Bureau of Economic Research, 1964, xvi, 187 pages.

[27] *Ibid.*, p. 9 *et seq.*

[28] *Ibid.*, p. 9.

[29] *Ibid.*, p. 10.

[30] With respect to equation (4) one observation should be made. There is a mistake or a printing error in the equation as used by Becker. The original equation is:

$$MP_o + \sum_{t=1}^{n-1} \frac{MP_t}{(1+i)^t} = W_o + k + \sum_{t=1}^{n-1} \frac{W_t}{(1+i)^t}$$

the n-1 is definitely an error. There is also another point which we should bring attention to: in his equation (3) (and also (3) in our paper) Becker implies that R and E are respectively collected and paid at the end of the period, while in equation (4) (also (4) in our paper) he implies that R and E are collected and paid at the beginning of the period. In other words, while in equation (3) R_o and E_o are discounted, they are not discounted in (4). Hence, equation (3) should read

$$\sum_{t=0}^{n} \frac{R_t}{(1+i)^t} = \sum_{t=0}^{n} \frac{E_t}{(1+i)^t}$$

if R and E are collected and paid at the beginning of the period. If we let equation (3) stand as printed then equation (4) should be changed as follows:

$$\frac{MP_o}{(1+i)} + \sum_{t=1}^{n-1} \frac{MP_t}{(1+i)^{t+1}} = \frac{W_o + k}{(1+i)} + \sum_{t=1}^{n-1} \frac{W_t}{(1+i)^{t+1}} .$$

[31] *Ibid.*

[32] *Ibid.*, p. 12.

THE CAPITALIZATION OF A TRADITIONAL PURSUIT: THE CASE OF WILD RICE IN MANITOBA

by

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SUMMARY

With the utilization of the concept of a "natural resource system," which combines the analysis of ecological (natural), economic, and social variables into a coherent framework, this article delineates the process that changed wild rice from a subsistence staple crop to what in the near future will be a heavily capitalized agricultural industry.

It is shown that the Indians, who were the original exploiters of this natural resource, have lost more and more of their control over the economic activity. It is furthermore demonstrated that this diminishing control is not due to any cultural inabilities on the part of the Indians; rather it is shown that the Euro-Americans have assumed more and more control over wild rice because of the vast financial institutions which have encouraged this development, from the Hudson's Bay Company in earlier days to major food industries today.

It is argued that the "developments" in the wild rice industry are in fact detrimental to the interests of the Indian population. This is partly due to the difficulties the Indians encounter in their attempts to finance wild rice paddy developments.

It is argued that the changes in the wild rice industry in effect contribute to the development of underdevelopment on Indian reserves.

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Mr. G. Sigurdson, economist and lawyer, Winnipeg, has been an untiring discussion partner. He also suggested many changes in English usage in earlier drafts of this paper.

Through the Center for Settlement Studies at the University of Manitoba, who kindly consented to publish

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this paper in English, it is my pleasure to make this paper readily available in Canada.

Special thanks, however, must go to the residents of Fort Alexander Indian Reserve, for all friendship shown me and my wife during a more than year-long stay. They went to pains to clarify their positions with regard to the topic of this paper and many other subjects. They took us along to the rice fields, hoping I would be able to endure the very hard and skilled work that wild rice harvesting involves. Also, they willingly read early drafts and commented on this paper. Mr. Dave Courchene, President of the Manitoba Indian Brotherhood, and Mr. Walter Courchene, President of the Manitoba Indian Wild Rice Producers' Co-op, Ltd., gave me permission to participate in the harvest and gave freely of their time for discussions. Mr. Jim Fontaine, my partner in the wild rice harvesting canoe, in addition to being a good friend, proved to be an excellent teacher in the art of wild rice harvesting.

In spite of all my obligations to others, I assume full responsibility for the content of this paper.

Winnipeg, February 25, 1973

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TABLE OF CONTENTS

	Page
SUMMARY	iii
ACKNOWLEDGMENTS	v
LIST OF TABLES	ix
INTRODUCTION	1
THEORETICAL CONSIDERATIONS	4
The Development of Underdevelopment	4
The Resource System Concept as a Theoretical Framework	5
THE WILD RICE AND THE FUR TRADE	8
EARLY RESERVE-BASED WILD RICE HARVESTING	13
PRESENT-DAY NATURAL PICKING	16
Legislation	16
The Manitoba Indian Wild Rice Producers' Co-operative Ltd.	18
The Role of Wild Rice in Indian Life Today	19
PRESENT PADDY PRODUCTION	23
Reasons for Paddy Developments in Manitoba	24
The Larger Society, the Indians, and the Early Paddy Developments	26
Experimental Paddies	27
Paddy Developments in Fort Alexander	30
THE FUTURE	33
Production with Improved Seed	33
Financing of Future Indian Paddy Developments	35
The "Commercially Sized" Paddy in Fort Alexander	37
Conclusions from the History of the "Commercially Sized" Paddy in Fort Alexander	46

Page

WIDER IMPLICATIONS FOR THE FUTURE 49

CONCLUDING REMARKS 51

FOOTNOTES 57

BIBLIOGRAPHY 63

LIST OF TABLES

Page

TABLE 1 CHANGES IN THE WILD RICE RESOURCE SYSTEM 52

INTRODUCTION

Wild Rice, *Zizania aquatica*, is known under many names, some of which include "Indian Rice," "Canadian rice," and *riz sauvage* or *folle avoine*,[1] in French. In the Ojibwa language it is known as *mah no min*; indeed, one Algonkian tribe, the Menominees, derives its name from wild rice. In North America, wild rice is located predominantly in an area embracing northern Saskatchewan and the eastern woodland area as far southwest as Kansas and along the Atlantic coast as far south as New Orleans. Today as a commercial crop, however, its importance is confined to Manitoba, Ontario, Wisconsin, and Minnesota,[2] primarily due to the richness of the yields and the distinct flavor of the variety found in this area.

Historically, wild rice was an important staple crop to some Indian groups; it was also important as a means of subsistence to the fur traders, primarily in the area between the Great Lakes and the prairie. During this century wild rice has become a very expensive delicacy with a retail price of up to about $15 per pound. In the recent past, paddy growing of wild rice has proved successful, and paddies are now rapidly replacing natural stands in rivers and lakes as the most important source of wild rice. Agricultural crossbreeding techniques are presently being applied in order to produce a high-yielding straw which will be grown in paddies with the application of such modern farming aids as

fertilizers, fungicides, pesticides, etc.

In this article, an attempt will be made to describe and analyze the process that changed wild rice from a subsistence staple crop to what will become a full-fledged agricultural industry. Special attention will be given both to the present situation and to predictions as to the future. As will later be shown, the present developments in wild rice production have, at least in certain areas, been hailed as a virtual panacea for at least part of the "Indian problem" defined as unemployment, reserves lacking in natural resources, etc.[3]

A principal objective of this paper is a critical examination of whether it justifiably can be said that the present changes in the wild rice industry will be of future benefit to the Indian people.

The empirical material derives mainly from Manitoba. The bulk of the field data originates in Fort Alexander, an Indian reserve lying at the mouth of the Winnipeg River on the east shore of Lake Winnipeg.

Historically, the area was inhabited by the Crees, as witnessed by La Verendrye, who established a fur-trade post at this location (the second Fort Maurepas). Alexander Henry on his westward journey here had his first encounter with the Crees.[4] By the end of the eighteenth century, however, the Ojibwa Indians had replaced the Cree, and the existence of an abundance

of fish made possible a fairly large settlement. Today, more than 2,000 persons are on the band list in Fort Alexander, of whom fewer than one fourth reside outside the reserve.

There are several reasons why the case study approach has been utilized in this paper, particularly in the chapters dealing with the contemporary scene. It is the author's firm conviction that, insofar as case studies make it possible to draw general conclusions, they are in many ways superior tools when attempts are made to analyze a wide variety of phenomena in the field of social and economic relations. In this paper, the case study approach (as opposed to a more statistically based type of inquiry) has been used to describe the relationships between the local community and the bureaucracies of the larger society as reflected in economic development programs involving wild rice. Hereby, it is possible to derive some insights into the reasons for the success or the failure of such programs, that one could not determine by using any other method. The case study approach, as utilized in this paper, is not intended to reflect negatively on particular civil servants who have been involved in the cases described. Rather, the author has been looking for conclusions which relate to more fundamental issues.

Finally, one should mention that this paper which is presented here was prepared as part of a research project, the aim of which is to explore certain relationships between social and economic change in duo-ethnic

settings. Particular attention will be given to the dynamics of interaction between the larger society and the local community. This perspective is reflected in this paper, for the thesis serves both as an illustration of an ethnic majority-minority relationship and also as a demonstration of the ways in which a local community can lose control over local assets. Subsequent publications will further illuminate many of the theses explored in this paper.

THEORETICAL CONSIDERATIONS

The Development of Underdevelopment[5]

It is widely assumed that the poverty of the Indian population is somehow rooted in a cultural inability on the part of the Indians to cope with the demands of a westernized society, an inability which is said to be responsible for their "economically marginal position." Colloquially, this attitude is reflected in questions such as, "Why haven't the Indians been able to make it?" In policy, the same attitude underpins a variety of programs, as for example, the heavy stress on education, nurseries and "cultural inclusion" curricula, and guided shopping tours to supermarkets. Founded on the same intellectual premise are numerous scholarly works on "development" that purport to demonstrate how the Indian population in various ways is adopting the models of the larger, westernized society.

This dualistic perspective (where the Euro-American

and the Indian populations are seen as discrete cultural and socioeconomic units) is hard to defend against the background of an ever increasing body of facts concerning the Indian population and the larger society. Although this article is limited in subject matter to certain questions related to one particular resource—wild rice —it is hoped that it will elucidate the need for a more dialectic perspective on the relationship between the Indian population and the larger society.

As will be shown below, the reasons why the Indians have gradually lost, and are still losing, more and more of the control over this natural resource are not related to any peculiarities in "Indian culture." Nor are they related to differences in innovative or entrepreneurial spirit between Indians and Euro-Americans. The reasons why the Euro-Americans have assumed more and more control over wild rice are related to the fact that they have acted on behalf of and with the backing of vast institutions, from the Hudson's Bay Company in earlier days to major food companies today. In this respect, the present article is in accordance with the metropolitan-hinterland concept, impressively brought to the fore by Innis in his work on the fur trade in Canada.[6]

The Resource System Concept as a Theoretical Framework

The resource system concept will be utilized as a theoretical framework in this paper. A resource system can be conceptualized as consisting of ecological (natural), social, and economic variables and has to be

analyzed with the help of methods employed within corresponding scholarly fields. For each of these variables, an optimum can at least analytically be construed, in which the ecologic (natural), social, or economic variable is brought to its most advantageous expression, as defined by prestated assumptions. Although optima for all variables "can never be achieved simultaneously in real life," they can "nevertheless serve as ideal standards from which a resource system departs at the cost of predictable consequences."[7]

Three significant phases related to the natural ecology of wild rice will be discussed: the natural growing in lakes and rivers, the paddy production started during the 1960's, and the (future) paddy production with improved seed, fertilizers, etc.

The social variable related to wild rice is of a highly complex nature and will be discussed most extensively with regard to the present and the future. The discussion will deal primarily with the Indian people and the control they at different times have been able to muster over this resource. In this part of the analysis, it will to some extent be possible to read this account as a revealing example of what has often happened to indigenous populations in their dealings with a larger society. Of particular interest in the discussion of the social variable is the changing impact of the wild rice activities on the social life of the Indian people; a related aspect is the existence of ethnic boundary mechanisms between Indians and Euro-Americans insofar as they have been of significance to the utilization of wild rice

as a natural resource. Social and cognitive structures have to be analyzed in the context of these types of considerations. For each change in the ecologic (natural) and economic variables in the wild rice resource system, the adaptations on the part of the Indian people must be examined. Here emphasis has to be on emerging social and economic organizational forms, decision-making patterns, innovations, and changing conceptions of their own situation.

In this analysis of a resource system the economic variable will involve primarily a discussion of the impact on output of different inputs of manpower, capital, etc., in the exploitation of wild rice as a natural resource. Distribution and consumption patterns will also be described. It will be shown that heavy capitalization is inherent in wild rice production and the attendant harvesting returns of the future paddy style of operation. This fact is basic for an understanding of what the future will mean for the Indian population in its relationship to the emerging wild rice industry.

It is hoped that this attempt to combine the analysis of the ecologic (natural), social, and economic variables in the theoretical framework of a resource system will provide a thorough insight into the process of capitalization and that this process will highlight the interplay between the social variable and the other two.

THE WILD RICE AND THE FUR TRADE

Before the fur traders penetrated the area west of Lake Superior, wild rice must have been a staple crop to the Indian people and was an important dietary source, at least during the fall and winter. Harvesting, curing, drying, threshing, winnowing, and storing techniques were already established which would not be changed until this century.[8] Even sowing might have been practised,[9] but aside from that possibility, the Indians exploited wild rice without affecting the habitat. It has been estimated that less than one-tenth of the crop is harvested by "hand-picking," while the rest shatters,[10] since the wild rice straw ripens unevenly and shatters when ripe. The effect on the natural ecology of this harvesting method is negligible. The harvest of rice, locally consumed, was part of a subsistence economy that included fishing, big game hunting, the gathering of maple syrup, and similar activities.

For the fur traders, the wild rice came to play an important role in their subsistence. In the Lake of the Woods area, Alexander Henry in 1775 gave out gunpowder, bullets, and rum. After the men began to drink, "... the women brought me a further and very valuable present, of twenty bags of rice. This I returned with goods and rum, and at the same time offered more, for an additional quantity of rice. A trade was opened, the women bartering rice, while the men were drinking. Before morning, I had purchased a hundred bags, of nearly a bushel measure each.

Without a large quantity of rice, the voyage could not have been prosecuted to its completion. The canoes, as I have already observed, are not large enough to carry provisions, leaving merchandise wholly out of the question."[11]

Several decades later, David Thompson arrived in the North-West Company fort, at what is now known as Cass Lake and found that "Mr. Sayer and his Men had passed the whole winter on wild rice and maple sugar, which keeps them alive, but poor in flesh...."[12] Now the Indians "collect not only enough [wild rice] for themselves, but also as much as the fur traders will buy from them...."[13]

Wild rice had thus become essential for the fur traders as a means of subsistence. While still collected the same way as earlier, it became part of a trade that involved furs, fish, pemmican, traps, guns, etc. Rich asserts that for the North-West Company, wild rice and fish from the Rainy Lake (Lac La Pluie) Department "were invaluable, and any rival who diverted Indians there from providing such food for the brigades was accepted as a menace out of all proportions to the furs which he might trade."[14] Hickerson argues that "Fur trapping... was by no means the exclusive, or even the most important, pursuit of the border people during the proto-historical and early historical periods. Large game hunting, fishing, wild rice harvesting, canoe building and even toll collection (called *extortion* or *pillage* by the Europeans) were all pursuits productive to the raw materials and commodities of subsistence and trade."[15]

Later on, when hunting for furs became the most important pursuit, as opposed to gathering supplies for the trade posts, canoe building, etc., the "Chippewa attempted to lay in a supply of provisions, chiefly wild rice, but also corn, fish and occasionally the meat of larger animals.... So great was this reliance on wild rice, that when the wild rice failed, so did the 'hunts,' because the Indians then would have to concentrate their whole attention on gaining subsistence during the harsh winter season."[16]

This obstacle to the fur trade was, however, remedied: "...the traders obtained some of the surplus [of wild rice, dried fish, dried meat, wheat, potatoes], and found it very handy...to subsist Indians who would come into the trading post...during the winter.... The major part of these provisions was gotten in the first place from the very Chippewa whom they later subsisted.... This amounted to a kind of insurance system for the Indians, a system which also assured their continued adherence to the trader.... The trading posts now behaved as an intermediary, and the trader a middleman in the distribution of 'surplus,' the pretrade system having been much different to this effect: that 'surplus' production by one segment of a socioeconomic organism, perhaps as family within a band, would have been immediately and directly distributed throughout the entire band."[17]

That the Indians bargained for their rice is affirmed by Paul Kane, who wrote in 1848 when he passed through Fort Alexander (then one of Hudson's Bay Company's main provision depots): "...we found a great number of

Saulteaux Indians, who come in large numbers about this season of the year, and disperse themselves among the small lakes, where they gather great quantities of wild rice.... The scarcity of other provisions in these parts renders the rice very valuable, but the Indians are so lazy, that they will not collect much more than they want for themselves without being bribed to do so, and the clerk in charge of the establishment is obliged to give them, for that purpose, a certain quantity of rum to induce them to go to collect rice for the establishment, and also give them some on their return, besides paying them in goods for the quantity they bring in."[18]

The wild rice supply varied considerably between good and bad years. It was obviously quite a serious thing when the wild rice was scarce. Hind wrote in the year 1857 when he came to Lac du Bonnet, some twenty-five miles southeast of Fort Alexander along the Winnipeg River: "The Indians we met lamented the failure of the rice this year;.... The same cause [the extraordinary high water level] which originated the partial failure of the wild rice led also to a great scarcity of fish.... With a partial failure in the rice, great scarcity of fish, and the prospect of a very limited supply of rabbits, the anticipations of the coming winter on the part of those who cared to think of the sufferings of the wretched Indians of the Winnipeg, were gloomy indeed."[19]

In the context of the Indians around the mouth of the Winnipeg River (at the present-day Fort Alexander) wild rice assumed a particular significance, for it was one of the main components of their livelihood, which

also included returns from fishing, hunting, and, to some extent, cultivation. From this region, "the fur returns were negligible.... The value of posts was strategic, and Bas de la Rivière [the H.B.C. post] where the Winnipeg River runs into the Lake, was a strategic centre."[20] The Indians were also engaged in various auxiliary activities related to the fur trade.

Wild rice was thus part of a yearly subsistence cycle for the Indians in the area around Fort Alexander. The social organization of many Ojibwa bands, particularly those for which fishing was a major part of the subsistence activities, as was the case around Fort Alexander, is as yet relatively unknown, as Hickerson rightly has pointed out.[21] A rather permanent village system, no individual rice or fishing grounds, and a fairly large population are some of the features that have to be taken into account in a description of the social organization of the Indians around Fort Alexander in earlier days, as well as micro-ecological factors such as a generally extreme abundance of fish and wild rice. (This theme will be further explored in a forthcoming paper.) In addition to the above, it is in this context sufficient to point out that the social organization of the Fort Alexander Indians differed quite markedly from the "Northern Ojibwa," with their family hunting territory system, small and scattered family groups, and a heavy emphasis on a hunting economy,[22] and also from the "Southwestern Chippewa," with their politically and militarily significant village system.[23]

EARLY RESERVE-BASED WILD RICE HARVESTING

With the cessation of the fur trade monopolies, the colonization of the West, and the signing of the Indian treaties in Manitoba during the first years in the 1870's, a somewhat larger market for wild rice was opened and caused a marginal involvement by some settlers. Otherwise, the Indians were still the sole harvesters and processors. They relied on the rice to a fairly high degree as a staple crop and sold the surplus to white people in nearby towns and lumber camps. The changing times required more cash than what was needed earlier. For this reason, the selling of an increasing proportion of the harvest became increasingly important.

The Indians harvested the rice in the traditional way, from a canoe, as it is still done today. One person paddles, and the other harvests. The harvesting is done with two sticks. With one the harvester bends the rather high straw over the canoe. A light blow with the other stick causes the ripe seed to fall into the canoe. Efficient harvesting requires great skill by both persons. The harvester must pull the straw (which often extends several feet over his head) into exactly the proper angle over the canoe in order that the rice should not fall on either side of the canoe. Furthermore, the blow has to be struck at the proper angle with a delicately balanced force; otherwise the straw will either break (thereby ruining the possibility of the stock restoring itself to an upright position to allow for a subsequent harvest) or the blow will be too light to cause the ripe seed to

fall into the canoe. The paddler has to steer the way through the fields looking for thick stands of ripe rice. Ripe rice varies very slightly in color from unripe rice. The paddler has to take into account the position of the sun, whether it is behind or in front, if it stands high or low, in order to separate "good" (ripe) rice from "bad" (unripe) rice. To find ripe rice from the observation point one has when sitting on the bottom of a canoe is, under these circumstances, no mean feat in itself. When the paddler has to work the canoe for eight or ten hours through shallow, often inch-deep water, pull over muskrat holes, fight the way through wild rice stands that are so thick that the canoe almost loses contact with the water surface, it is easy to understand that to be the paddler requires stamina as well as skill.

The harvest collected this way varies considerably, from some 100 pounds up to 600-700 pounds per day. The yield seldom exceeds 100 pounds per acre, and this might represent only 10 per cent of the actual supply. The rest shatters. Each location can be harvested several times, requiring only a few days interval between successive harvestings.

Earlier, up to and including the decades surrounding the turn of the century, the Indians processed the rice themselves. To remove the hard outer sheath ("husk") the rice was first heated on a rack of willows. After the heating, the rice was put in stone or clay hollows, where the younger men and the boys "danced the rice," so that the outer husk could be loosened. To separate the husk from the grain, the rice was placed in birch-bark dishes,

tossed in the air, and the wind removed the husks.[24]

Governmental involvement in wild rice production began as early as the late nineteenth century. What today would be called an economic development program involving wild rice was envisaged in connection with the problem of feeding the railway-building crews. The Honourable, The Indian Commissioner in Regina, J. A. Macrae wrote to the Right Honourable, The Superintendent General of Indian Affairs, that "...all our agents express the opinion (of course subject to correction) that they have lakes on their Reserves, where it [wild rice] would thrive....[25] On the basis of this premise 128 bushels were bought for seeding purposes, and distributed to the different agencies in 1887. The project seems to have failed quite badly; in January, 1888, Macrae diplomatically notes: "From the Nature of the reports sent, it will be seen that nothing of a real success has yet been obtained." He goes on to ascribe the failure to the fact that the seed was packed and transported in sacks instead of in boxes.

New attempts were made in 1888, but according to a letter from J. C. Gilchrist, a consultant temporarily retained to ensure success in the venture: "...the most careful search during the summer disclosed no sign of the rice growing in the Touchwoods...[or] File Hills [or] [unintelligible]." These were the only places examined.

These two failures were, however, not enough to discourage the Indian Commissioner in Regina, who

writes in 1890 to the Superintendent General: "I have the honour to recommend that another experiment be made for the growing of wild rice.... Owing to the usually dry weather last summer the growth became dry and the grain failed to grow...."[26]

PRESENT-DAY NATURAL PICKING

By the 1920's wild rice had become a luxury article, used primarily for serving together with wild fowl and meat, and the price paid to the Indians for wild rice had increased. Thus, in 1928 an Indian family earned $240, a considerable amount, picking wild rice.[27] The increasing profitability attracted some white individuals, who, in this period, introduced primitive harvesting machines and mechanical processing facilities.

Legislation

Emerging competition between Indians and Euro-Americans led to legislation in Canada as well as in the United States. The legislation in Manitoba has several features. Harvesting machines were forbidden, since they were found to destroy the stands for future harvests. The Indians, on the other hand, are always to be hired if they are available, since their method of picking is ecologically superior to any other harvesting technique.[28]

Another feature of the legislation is a lease system, which makes it possible for the government to

control the wild rice harvesting. An area or a location can be included in one lease, for which the annual fee ranges from $10 to $25, depending upon accessibility and production potential of the area covered in the lease. On the harvest bought by a leaseholder, he had up to the 1971 season to pay a royalty to the Province, either 7½ or 12½ per cent of his sale price, the rate mainly depending upon the accessibility of the harvest area.[29]

The leases seem, without exception, to have been awarded to white entrepreneurs, many of whom were bush pilots, fish plant operators, and traders already deriving business from their involvment in native settlements. Since these leaseholders, with a few exceptions, did not have processing facilities, they resold their rice to processors, generally large food companies.

It should be noted that during the last two years the Manitoba government has tried to move away from the system with a number of individual leaseholders. Instead, it has given the Manitoba Indian Wild Rice Producers' Co-op (which will be presented below) a large number of leases, covering substantial parts of northeastern Manitoba.

Although this legislation regarding wild rice has been frequently circumvented by unscrupulous leaseholders, it made it possible for the Indians to maintain their position as pickers. The processing of wild rice, however, was transferred from the Indians to persons who could command capital for processing facilities and also

had capital to buy enough rice to make a profit out of a processing plant. The Indians could not even afford to operate as leaseholders or to buy the rice that came out of the area covered by the lease.[30]

The Manitoba Indian Wild Rice Producers' Co-operative Ltd.

In the present situation, a factor of major importance was the formation in 1964 of the Manitoba Indian Wild Rice Producers' Co-operative Ltd., an organization formed by the co-operative efforts of a number of Manitoba Indian bands. The aim of this co-op was primarily to ensure the Indians a fair return on the harvest and also to create a more prominent role for the Indians in the processing and wholesale areas. The early years of the co-op were less than successful, mainly because the co-op lacked control over the leases. Most of the wild rice in Manitoba is found however on Crown land, particularly in the Whiteshell Provincial Park in eastern Manitoba. During the course of the last few years the co-op has been successful in gradually obtaining the leases in these areas. It is now by far the most influential buyer of wild rice, indeed to the extent that the price the co-op pays to the harvesters sets the price paid by the other buyers, although the latter generally have to pay slightly more in order to compensate for the co-op's "fringe benefits," which include camps, transportation, etc. Today sixteen bands are members of the co-op, and the co-op is at present actively engaged in attempts to initiate paddy production (to be discussed later). Any surplus realized by the co-op is used for the purpose of planning future paddy production. (Most

recently, in 1972, the co-op obtained numerous leases covering parts of northeastern Manitoba and received a loan and a grant for the erection of a processing plant.)

The Role of Wild Rice in Indian Life Today

Today wild rice is no longer an important dietary source for the Indians in Manitoba. On the contrary, Indians seldom have more than a few meals with wild rice. It is, however, highly praised for its taste, and since very few persons seem knowledgeable enough or willing enough to process the rice, it is not unusual for a lease-holder to induce sufficient harvesters by offering them processed rice for a low price as a bonus. But even if wild rice has lost in importance as a food item for the Indians, its importance in the economy and social life of a reserve is very distinct.

Approximately a thousand Indians are each year occupied in wild rice harvesting in Manitoba.[31] The returns per individual from the three weeks the harvesting lasts vary considerably, but for many returns reached well above $1,000 in the 1967 peak year. The importance of this cash income to the Indians concerned is hard to overestimate.

The price the Indians receive ranges from about $.45 to $1.00 per pound, depending on the size of the harvest and other factors. By the time the wild rice reaches the retail market, its price has increased to at least $7.00 per pound in recent years and has reached

considerably higher levels from time to time. A combination of the returns to the processor and middlemen and the inevitable loss of weight during processing (approximately one-half) accounts for the price disparity between the field and the market.

Harvesting statistics are, however, not sufficient to describe the significant role wild rice plays in the social life of a reserve in the wild rice belt in Manitoba. From the early summer, when the wild rice starts to show above the water surface, the Indians will comment upon the coming harvest: "Oh, it looks like a bad year, this is no good. You should see what it looks like in a good year. It's like a green mat, there is just nothing but wild rice. And then you know there will be lots of fun picking it." (A comment in June, 1971, while driving through the Whiteshell Provincial Park.) "This is gonna be one hell of a year, so it looks now, anyhow. Low water, that's good. But I never make much money from it. It's more like a gathering to me. It's a good life though. When you wake up in the morning the dew can have made the sleeping-bag wet, and everything is wet. That's when coffee tastes the best. It can never taste better." (From field notes, July, 1972.) These remarks, all the more significant by virtue of the fact that they orginate with an Indian who has held a job in a paper mill for fifteen years, are representative of comments made by many other Indians. Employed or unemployed, living on or off the reserve, everybody wants to participate in the wild rice harvest, at least as much because of its social value as because of the possible revenue.

When the harvesting time approaches, many Indians go on scouting expeditions. There are rumors of places where you will make "a killing," but as a matter of fact most Indians during harvesting time gather around a fairly limited number of places, which provide enough work for everybody. Occasional parties of Indians set out for more isolated areas.

Harvesting time is a period of bustling activity for the reserve population. Usually groups, but sometimes individuals, set out with canoes strapped to their cars, or come home for a short visit from the rice fields. Almost anybody who can free himself goes out picking. Most of the younger women are obliged to stay home and take care of the children, which makes the rice harvesting an opportunity for the men to gather, drink, talk, and generally have a good time. Also, people from different reserves and Indians working in towns meet or visit each others' encampments. The constant competition between the harvesting teams provides a joyously competitive atmosphere. Friends who have not seen each other for a long time share in various social activities.

Wild rice harvesting also provides the Indian with one of the few possibilities he has to "beat the system." Generally, he is the subject of welfare administrators, bosses, arbitrary decisions, and forces over which he has a very limited control. During this time the Indian earns his money in a situation in which he is his own master. The odd prank played on the buyer takes on an added significance in this context, since

it reinforces the Indian's conception of being in control of the harvesting. Hence stories about buyers being tricked into purchasing bags of oats topped with a layer of wild rice are told and retold.

After the harvest, the things that happened during the harvest will often be recollected. Perhaps somebody's canoe upset and a good number of pounds of wild rice were lost, together with tent and equipment. Or somebody went out picking in the night, looking for rice, only to discover in the morning that he had been working his way through seaweed. Such episodes will provide laughter for many social occasions thereafter.

When talking about wild rice, it is constantly emphasized that "it's an Indian thing," and wild rice harvesting is indeed considered by many Indians as an important part of being Indian. The money earned is not referred to as "bread," and what it buys is not "loot," two words with a slightly derogatory meaning. Wild rice money is "hard-earned money," "good money," money earned "while you live as an Indian," and probably most of the Indians count on it to meet urgent needs such as hydro bills, car repairs, or the grocery bill. It is worthwhile to observe that the money which comes through the welfare services is conceptually held apart from this "hard-earned money."

The very important economic addition the wild rice harvest represents for a high percentage of the families in a reserve such as Fort Alexander is hard to overestimate, especially since it provides a large sum of

cash, readily available, as opposed to "hand-outs" (welfare) or family allowances. The less tangible social aspect is probably no less important. It is an opportunity for identity reconfirmation and a chance for Indians irrespective of occupation or place of residence to re-establish their common background. The social distance between Indians living on reserves and Indians living in towns is shortened, and many of the social disadvantages suffered by Indians living away from the reserve are lessened. "Gee, is it ever a good time."

PRESENT PADDY PRODUCTION

Many attempts have been made to domesticate wild rice. An American invested one million dollars in an unsuccessful attempt during the early sixties.[32] The first initiatives that eventually led to successful paddy growing operations took place in Minnesota. Since 1965 and 1966, when only twenty-two acres were utilized for wild rice paddy production, an explosive development has taken place, which has meant that today probably more than half of the world's wild rice production originates from paddies.[33]

Although the seed used in paddies is still basically the wild variety, the controlled water level, amongst other things, ensures a higher yield per acre than is possible in natural stands. The legislation mentioned earlier does not apply to paddy production,

and harvesting machines can be utilized. The yields in paddies are up to 300 to 500 pounds per acre. The ratio between capital costs and returns makes paddy growing extremely rewarding. Large food companies, primarily Uncle Ben Inc., has further encouraged paddy growing by providing seed and three-year marketing contracts.[34] As yet, this development has not meant any reduction in the price of wild rice, partly due to the increased demand for wild rice for seeding purposes and partly due to increased marketing efforts.[35]

Reasons for Paddy Developments in Manitoba

Up to 1970, paddy production was pretty well confined to Minnesota, but planning for the implementation of paddy growing in Manitoba was under way. In 1968 a report to the Manitoba Department of Commerce and Industry by Arthur D. Little Inc., a large U.S.-based consultant firm, stated that: "Paddy production could contribute to additional employment and income within the Indian community. It could serve as a rallying point in strengthening Indian/Métis management skills and in strengthening Indian/Métis producer or processor cooperatives. Member loans or share purchases tied in with such cooperatives could serve as a vehicle for education in capital use and returns to capital."[36] In 1969 the Project and Resources Branch of the Department of Mines and Natural Resources in Manitoba presented "An Introductory Plan for the Development of Wild Rice in Manitoba," which stated that: "Wild Rice ... offers a considerable potential for a region of the Province that is

not suited for other forms of agricultural endeavour and which contains a fairly large number of economically impoverished Indians."[37]

The Manitoba Indian Wild Rice Producers' Co-op also realized that the paddy development would eventually affect their own situation and in December, 1970, decided "that if the Indian people were to maintain their hereditary position in wild rice production, the people would have to enter into production from paddies."[38] The co-op decided that it would have to go into processing and marketing, co-ordinate an implementation program over a five-year period, and build up an extension service to give Indian bands, groups, and individuals assistance.

All these reports clearly recognized that Manitoba was in a "forced" situation—if Manitoba wanted to be a place to be reckoned with in future wild rice production, the Province would have to give support and initiate paddy production. It is noticeable, however, that the possible benefits for the Indians were stressed. Also prominent were discussions of organizational forms that paddy producing can take on reserves. The co-operative structure was heavily promoted. How this could promote an "education in capital use"[39] was also emphasized.

That co-operative organizational structures of business ventures on Indian reserves are particularly useful has a complex ideological history. By some, the co-operative structure is promoted because it will, in their opinion, capitalize on presumed sharing and egalitarian patterns in Indian communities. Others see the

co-operative as an economic extension of community development—social animation programs, whereby the community residents are to identify their needs and work together to solve problems held in common. In this context, the educational aspect of economic enterprises takes on particular relevance.[40]

The Larger Society, the Indians, and the Early Paddy Developments

The Department of Indian Affairs and the provincial agencies involved, viewed wild rice production in paddies as a possible solution to many evils. The "wild rice belt" in Manitoba, on the eastern side of Lake Winnipeg, is a marginal farming area. Conventional farming on the reserves in the area was regarded by many as educational experience for the Indians involved rather than as a sound business operation. Wild rice paddy developments held forth the promise that farming in marginal areas could be abandoned and that the land could be turned into successful paddy operations. For some reserves where economic development programs seemed difficult to implement due to transportation problems, lack of natural resources, etc., wild rice production in paddies seemed a promising venture. The Indians' willingness to try what could be a promising field of economic activity was obvious from such facts as that early in 1971 twelve bands had indicated their interest to the Manitoba Indian Wild Rice Producers' Co-op, Ltd.

The outlook for the future appeared bright on the surface. To the agencies of the larger society the

capitalization of a traditional Indian pursuit such as wild rice production was particularly appealing. It does seem, however, that whatever trust the Indians originally had in these agencies as assistants in this venture is rapidly deteriorating. To many Indians, including leaders of the provincial organization, the involvement of the larger society seems to follow a well-known and disconcerting pattern. This growing apprehension is caused by what is regarded as an undue stress on training, problems associated with acquisition of capital, and the creation of distorted organizational patterns attentive to the demands of possible sources of funding, as opposed to more practical and functional considerations.

Experimental Paddies

Early in 1970 when Indian groups on several reserves had already started to discuss paddy production and the possible role they could play in future wild rice production, the Department of Mines and Natural Resources in Manitoba entered into an agreement with a botanist at the University of Manitoba, the objectives of which were:

1. To demonstrate the feasibility of wild rice paddies to the native populations by involving them in all stages in a paddy pilot project.
2. To initiate a co-operative research project on wild rice cultivars.[41]

In the interim report, the author states: "The Indian trainees were most impressive in their comprehension

of paddy operations and their attitude was positive throughout the entire program."[42] An Indian comment on this was: "Look at that. When an Indian does something good, they single it out. What they really mean is that, by golly, these bastards could really do it....Training—there is nobody that is as well trained as the Indians.... To train Indians to grow wild rice is stupid. What we need is not training, but money for our own operations." (Edited from field notes, 1971.)

This project was continued in 1971, and in 1972 another grant of $55,954 was given to the same botanist for wild rice research. This caused quite a stir, and several Indians wondered, "Why do they give this kind of money to that university guy, when we have to fight like hell to get money for economic development?" (Edited from field notes, 1972; this and the former comment were made by Indians involved in the work of the provincial Indian organization.)[43]

Another instance that also increased the Indians' apprehensions in respect to the larger society's involvement was the paddy development at Fisher River Indian Reserve. The management instructor was retained by a provincial lending agency and had earlier been involved as an agricultural specialist in farming projects on reserves. The paddy in Fisher River was twenty-four acres, and approximately $30,000 was spent on it. The project was described in quite favorable terms in a governmental information sheet: "Take a wet area along the Fisher River, add the desire of an Indian Band to try a new venture, and include the financial resources

and advice of the Department of Indian Affairs. The result—24 acres of wild rice....Indian Affairs initiated the plan to grow wild rice on the reserve because of the suitability of the area for wild rice production...."[44]

The Indians, however, have a different opinion of the result: "They give this fellow...$30,000 to produce wild rice. You know what he got? Two bags! My God! Why can't they let the Indians do their own business? At least we wouldn't spend $15,000 on a bag of rice." (From field notes, 1972.)

It must be emphasized that reports on the experiences the Indians on different reserves encounter in their relationship with the agents of the larger society spread very quickly. The Manitoba Indian Brotherhood, the provincial Indian organization, with its system of regional vice-presidents and regional meetings between individuals interested in the same field of activity ensures fast communications between different reserves.

The cases related above, and others in the same field, might seem trivial but take on a considerable significance from an Indian point of view. "Instead of money to get going, we get training," is a frequent complaint from Indians who have wanted to start a business venture, not only in the wild rice business. Also, statements like these reveal a frustration with the larger society's lack of response in assisting Indians to pursue their own goals according to their own priorities. With respect to wild rice, many Indians today fear that "Indian Affairs, university guys and consultants will bungle things up."

Paddy Developments in Fort Alexander

Generally speaking, the Indians are well aware of the present trends in wild rice production and are anxious to receive a share of the benefits that will derive from paddy developments. For example, by 1971, this recognition had manifested itself in two paddies in Fort Alexander, which had been initiated by Indian groups.

The Indians' present involvement in paddy developments has been restrained by institutional factors, prominent among which are land acquisition and capital financing. In Fort Alexander, for example, there are a number of undeveloped areas. However, these comprise parts of lots to which there are hereditary and other claims. To make this land available for wild rice production would in many cases involve severe frictions. Accordingly, a broadened land base could well have a positive effect in facilitating paddy developments.

Access to adequate financing is, however, the dominant concern. For a multitude of reasons, Indian entrepreneurs have had very limited access to private lending sources. Hence, the Indians have been forced to rely on governmental sources of funding.

The nature of a growing disenchantment with the Department of Indian Affairs as a source of funding is well expressed in the following quotation from one member of a wild rice paddy co-operative in Fort Alexander: "To get money from Indian Affairs takes a long time.

If the Band wants the money, they can get it fast--if it is approved. But when individuals want it, they have to send the papers to Ottawa and what not. It is a hell of a mess, and takes a long time. You can't use them if you want to get started fast. And we didn't want to go through Chief and Council, and get the money from the Band. There are always individuals who don't like Chief and Council to help individuals. Look, everybody here is poor, with a few exceptions. If the Chief and Council help one or a few individuals with a lot of money, sure there are people who thinks that the Band members should have an equal share of what the Chief and Council can put their hands on. So it's much easier to get the money from the Province [the support service to co-operatives]. It doesn't take seven, or even three, to get a paddy going, but we had to get the money from them."[45] (From field notes, 1971.)

A further concern expressed in connection with DIAND involvement, which has already been referred to in the preceding discussion of experimental paddies, is the heavy emphasis placed on a training orientation as opposed to a strict business approach.

In Fort Alexander, one way of acquiring capital without the involvement of Indian Affairs has been to approach the provincial government, especially the branch concerned with support service to co-operatives. Although this can solve one problem (capital acquisition), it creates others. To qualify for the provincial support given to co-operatives there must be seven members of the board

of directors in charge of the operation. Since a wild rice paddy operation requires very limited labor input and is not dependent upon co-operation between individuals, the co-operative structure has no real compatibility with the logistics of wild rice production in paddies. It is therefore quite understandable that the board of directors of a wild rice co-operative in Fort Alexander is made up of a few interested individuals, with their wives and relatives making up the balance of the necessary seven members. That this kind of arrangement is very vulnerable to internal strife, which might indeed jeopardize the whole venture, is obvious.

In view of the rationale for the larger society's willingness to support co-operatives (discussed at the beginning of this chapter), it is interesting to note that the reasons why the co-operative model was adopted by paddy operators in Fort Alexander were generally contrary to what could have been expected. They wanted to get away from the training-education prerequisites, as stipulated by the Department of Indian Affairs. They also wanted to get away from the system of equal distribution of resources at the disposition of the Chief and Council. (This system of equal distribution has as one of its obvious results that it stifles abuse of formal political positions.)[46] Finally, they wanted capital for "straight business."[47]

THE FUTURE

Production with Improved Seed

The present developments in wild rice production, primarily paddy growing and, to a lesser extent, mechanical harvesting (at least in Manitoba), are only the beginning of changes that will deeply affect the wild rice industry and the Indians' participation in it. The prime factor in future changes will be related to the development of non-shattering, high-yielding straw. In all likelihood, by 1975, a straw will be in use that, with proper maintenance and harvesting equipment, will provide harvested yields of 1,800-2,000 pounds an acre, and the quality will be uniformly high.[48] This will lead to a true agricultural wild rice industry, where mechanical equipment, fertilizers, pesticides, and all other modern farming aids will be utilized in large mono-crop enterprises.[49]

The optimal size of one wild rice operation in the future can only be estimated at the present. Estimates vary, but a unit of 500 acres in wild rice production is likely to be an optimal size in the future. It is most likely that an operation of this size would need only one person's work during most of the year, with some assistance during harvesting time. From a wider point of view, it should be noted that the ecological disadvantages (particularly worthwhile to observe in the case of wild rice where insecticides, pesticides, etc., will be dumped right into water) do not seem to have received much attention as yet.

The fate of "natural picking" depends primarily on the future price of "green" (unprocessed) rice. Brooks claims that natural picking will not become obsolete.[50] There is, however, no reason to doubt that wild rice farming in paddies with improved seed will expand to a point where no windfall profits are possible from wild rice farming. The price paid for "green" rice will then be considerably lower than it is today. Natural picking will at that point no longer provide a reasonable economic return and will consequently become obsolete. This development might be hastened if processors in the future are unwilling to accept hand-picked rice of unpredictable quality, which is typical in natural stands.

Moreover, the fairly expensive distribution system from the picker of natural stands to the processor might break down before the price paid for green rice in itself has reached a low, stable price level. The future involvement of the Manitoba Indian Wild Rice Producers' Co-operative in the processing field cannot be taken as an indication that "natural picking" will resist obsolescence; it has to work under the same "economic laws" as any other business.

It is thus obvious that if the Indians are to play any part in wild rice production when hand-picking becomes obsolete, they will have to go into paddy production. In all reports relating to future wild rice production, the possible benefits for the Indian population have been stressed; these have provided an alibi for

providing generous research grants to explore the possibility of domesticating wild rice.[51]

Financing of Future Indian Paddy Developments

As discussed above, 500-acre paddies with non-shattering, high-yielding straw will probably be the dominant mode of wild rice production within a few years. This unit requires an investment of probably well above $300,000. Little estimates that an investment of $600,000 for a 1,000-acre paddy will be required.[52] Some costs included in Little's estimate would not be incurred on a reserve. However, the cost increases since the publication of Little's report in 1969 greatly outweigh these savings. Actual costs of recent developments seem to verify these figures. In Manitoba there are 15,000 acres "readily" available on Indian reserves for wild rice development, according to the Manitoba Indian Wild Rice Producers' Co-operative.[53] Therefore, to utilize this potential would require an investment probably well above $9,000,000.

Although banks and other financial lending institutions have, on a few occasions, provided loans to Indian entrepreneurs, banking cautiousness, lack of collateral,[54] etc., would suggest that the private sector is not a viable alternative to financing through the public sector. It is a reasonable assumption that private financing institutions would prefer to lend the large amounts of money required for wild rice developments to established (white) farmers.

Although some means have been opened up for Indians to get capital for economic development projects, the sums involved have been rather limited. What lies ahead will be a serious test of the public sector's willingness to let the Indian people get involved in economic development programs of a viable size.

That the native people will face competition in wild rice developments is obvious from the fact that white farmers have already begun paddies in Manitoba. If the Indians are to share in the initially high returns from paddy developments that are possible before the market has become stabilized at a level where the price for wild rice is fairly low and no excessive profits are possible, the Indians will have to get the necessary financial support without delay.

Not only does the public sector have to engage itself on a rather unprecedented financial scale, and with considerable speed, it must also abstain from making its influence felt to any greater extent than the borrowers conceive as necessary. The tragic tale of how development programs have been strangled in governmentally imposed conditions, supervision, and red tape to the extent that those who were to be the prime beneficiaries, the native people, no longer could identify themselves with the projects, must not be repeated.[55]

What has happened thus far with a proposed large-sized paddy development in Fort Alexander does, however, not give too much promise for the future. A fairly detailed description of the history behind this project,

with emphasis on the activities of the agencies of the larger society, is necessary in order to appreciate the frustration that Indians often feel in their dealings with various levels of government.

The "Commercially Sized" Paddy in Fort Alexander

In February, 1970, the Wild Rice Co-ordinating Committee, with representatives from the Province of Manitoba and Indian Affairs, met in Winnipeg. On this occasion: "Indian Affairs indicated that $5,000 was available to construct a 15 acre demonstration paddy at Fort Alexander Reserve. Mr. Freeman [an Indian Affairs' official] was to obtain the Band's approval for the project prior to notifying PFRA[56] to proceed with engineering and construction work." (From the minutes.) The minutes of the meeting also state: "If the Indians at Fort Alexander are interested and the demonstration paddy successful, indications are that financing would be available through Indian Affairs to develop a large commercial-sized paddy."

Two months later the first meeting was held in Fort Alexander, the description of which was recorded in the minutes. The purpose of this meeting was: "...to promote and establish an experimental Wild Rice growing program on the Fort Alexander Reserve....Some confusion was apparent at the outset of this meeting as to just what steps had been taken earlier on this program. Mr. Guimond [the Chief of Fort Alexander] stated that he was totally unaware of the program or

discussions held to date. Since he had received no minutes of previous meetings, Mr. Freeman informed him that just recently it had been suggested that Fort Alexander be approached with regard to acquisition of land for this project. Mr. Guimond stated that he and his Council would be more than happy to assist in any way that they could." (From the minutes.)

In the fall of 1971, the plans for a commercially sized paddy were being finalized. A consultant had made a study of the possible organizational setup, financial requirements, and likely returns. At a meeting between Chief Guimond and Sidney Green, Minister of the Department of Mines and Natural Resources in the Province of Manitoba, three possible sources of funding were discussed to complement the financial input from Indian Affairs. These were the Communities Economic Development Fund, then in the process of being established, ARDA[57] and Bill 17, whereby the province could join with others in a Crown corporation to exploit natural resources.[58]

A formula was worked out that involved the development of a 200-acre paddy, the organization and financing (partly) to be undertaken under Bill 17. The band was to have five members on the board of directors, the province, three. The band was to raise an equity of $50,000, the province $30,000, plus a $50,000 loan as working capital. The band was to raise its equity capital through Indian Affairs and/or ARDA.

The consultant retained for the development

stressed the importance of an early start, if the paddy was to be operational in 1972, and pointed out that this made financing through ARDA unfeasible, since ARDA took considerable time to process an application and reach a decision. (See letter of September 13, 1971.)

A few days later, the Indian Loan Fund Credit Committee of the Department of Indian Affairs informed Chief Guimond that it could not approve a loan of $50,000 for wild rice production. "The principal reason was the high risk nature of the project and the additional factor that should an interim loan be approved, the Committee would prejudice Your application with ARDA.... I have since met with Mr. Gavin of ARDA....The ARDA representative told us that a decision can not be given before the end of six weeks...." (Letter from V. Vokes, Indian Affairs, to Chief Guimond, September 17, 1971.) A subsequent letter from the Indian Affairs' Regional Director confirmed the reasons for refusal: "...I regret to advise You that this Department cannot approve the loan for the reasons given in Mr. Vokes' letter, nor could I commit funds from next year's appropriations because, as You know, our 1972-73 estimates have not yet been approved by Parliament. In view of the foregoing, therefore, I would encourage You to pursue Your approach under the ARDA...." (Letter from the Regional Director, Indian Affairs, to Chief Guimond, September 24, 1971.)

ARDA did, in effect, not approve the application as submitted, and the band returned for help to Indian Affairs. The province had meanwhile finalized its arrangements, and Cabinet approval had been received to

organize a Crown corporation together with the Fort Alexander Band under Bill 17.

In November, the financing was still unresolved. Indian Affairs informed Chief Guimond that: "The application from Your Band for financing a Wild Rice Enterprise has been under study by our Credit Committee, DREE (the Department of Regional Expansion, which handles ARDA applications) and the Manitoba Government. As yet, no definite plan of financing has been arranged as a number of complications have arisen including the inability to locate a suitable technical advisor for the project, establishment of land security... and other important factors." (Letter from the Regional Superintendent of Economic Development, November 11, 1971.)

During the late fall, however, Chief Guimond was given verbal assurance that Indian Affairs would give a loan of $50,000. (Minutes of the provisional board of Fort Alexander Wild Rice Producers, Ltd., December 7, 1971.)

Meanwhile, Indian Affairs had asked for the opinion of the Department of Justice regarding the proposed corporation. On December 13, 1971, the Department of Justice replied that the declaration of trust that the five Indian board members were to sign, should be to the effect that they held their shares in trust, not for the band as had been proposed, but rather should be "in favour of Her Majesty the Queen in right of Canada." Since the board members, who would be the sole shareholders, were to vote according to instructions issued by the party for which

they held their shares in trust, the proposal from the Department of Justice amounted to nothing less than a setup, where the province would have three members on the board of directors, the Crown five, and the Fort Alexander Band none.

Other developments were also taking place. A Winnipeg accounting firm made, on behalf of Indian Affairs, an evaluation of the financial information available on wild rice paddies and reported: "As requested, we have reviewed the studies supplied by Your officials relative to a typical two hundred acre plot divided into 50 acre paddies." From the information thus obtained they drew the conclusion, that the capital requirements in year one, provided that shattering seed (considerably cheaper than the non-shattering variety) was to be used, would amount to $176,950.

The Regional Superintendent of Economic Development, Indian Affairs, outlined in a letter to Chief Guimond, December 16, 1971, some of the problems related to final approval of the loan of $50,000, and also commented on the only material progress in the development of a large wild rice paddy in Fort Alexander (except the provincial government's firm commitment): "We have had a report from one of our agriculturalists indicating that the Band are already doing land work which in his opinion might be badly engineered and prove costly. Experience indicates that You cannot engage contractors at hourly rates but, rather, You must contract work at guide rates, and it is believed that this approved practise is not being followed. Our major concern is that the Band has

initiated a project for which funding has yet to be approved."

The cautious wording of the letter, "indicating," "might," "it is believed," etc., does not conceal the strong disapproval of the Band's action.

In April, 1972, a meeting was held of representatives of Indian Affairs, some provincial officials, and Chief Guimond. A new formula was discussed, in which the Department of Indian Affairs would turn over its loan of $50,000 to the province on the condition that the funds would be utilized for the purpose of establishing a wild rice paddy in Fort Alexander. Three members of the board of directors would be appointed, one band member, one provincial official, and one federal (Indian Affairs) official. They would all hold their shares in trust for the province, until all loans were paid back, at which point the shares would be transferred to the band. "Profit sharing to be based on a 5/8 Band and 3/8 Province ratio (Indian people to control the Company)." The Regional Superintendent for Economic Development, Indian Affairs, wanted a lease of thirty to fifty years for the land where the paddy was to be situated. (The above from the minutes of the meeting, April 20, 1972.)

In May, the Regional Director of Indian Affairs informed the province, that on April 24, "The Manitoba Loan Advisory Board of the Indian Economic Development Fund considered a loan to the Fort Alexander Band to operate a wild rice project. I approve, in principle,

that a loan be made by our Department....The major conditions which are presently contemplated in connection with a loan of this type will be:
1) That the entire share holdings of all parties be transferred to the Crown Provincial, and the Crown Federal, as their respective interests may appear. This transfer shall be subject to authority being vested in the transferee only upon default in repayment of the loan, or upon default or breach of any loan covenant."

A lease for some forty years is required. The letter continues in part,
"6) The Federal government would contemplate that the Fort Alexander Band Council will resolve to guarantee 10% of the loans granted to the Corporation by the two governments...in the event of default of any payment of the loans. This condition will be discussed with the Chief and Council....
9) Disbursements from the Indian Economic Development Fund account will be made jointly to the Corporation and the Province. Such disbursements will be in the form of advances upon request of both the Corporation and Provincial government, whose appointed representatives will assume primary responsibility for the operation of the project."

Other conditions outlined in this letter relate to a variety of other matters, engineering studies, etc. "Finally, the conditions will be subject to the advice of our legal advisor from the Department of Justice, the legal consultants from the Band and the Province." (Letter of May 5, 1972, from the Regional Director,

Indian Affairs, to the Assistant Deputy Mininster, Department of Mines and Natural Resources, Manitoba.)

In June, the Province informed Indian Affairs that the conditions presented were not acceptable to the Province.

In September, a new extensive plan for the wild rice corporation in Fort Alexander was suggested. A board of directors with eight members was proposed, with five representatives from the Crown Federal and three from the Crown Provincial. The aim of the corporation as expressed at that time was not solely economic. In the proposed operating policy, the board of directors were "To operate the Corporation...with a view of earning a profit" (p.13), and "To propose to governments future expansion and/or new developments where such are considered socially desirable and economically feasible" (p.13). The Company was also supposed to undertake and to initiate research. The Fort Alexander Band were successively, through purchase of equity, to assume control over the board of directors. (This had also been included in earlier proposals.)

It is worth while to observe that the Fort Alexander Band, without representation on the board of directors, were supposed to guarantee 10 per cent of all loans to the Company. (Even if some of the representatives of the Crown Federal had been Indians, they would have to vote as instructed by the Crown Federal, which in this context stands for Indian Affairs.)

In October, the province agreed to the new proposal, while the band was reluctant. Also, in view of the upcoming band elections in November, the outgoing administration was unwilling to commit itself to a proposal which was not altogether to its liking and which a new administration would have to recognize.

The new administration, according to information conveyed to the author, was informed that due to the high-risk nature of wild rice developments (a debatable proposition in view of the last year's explosive developments), Indian Affairs no longer wanted to give a loan for such undertakings, but would consider grants. (The logic behind the conclusion that high-risk ventures should be financed through grants rather than loans is possible to comprehend only by looking at the caution with which Indian Affairs feels obliged to operate in the field of economic development. Normally, a grant would be considered as a means of defraying extraordinary expenses relating to the creation of the necessary prerequisites for a business venture, such as labor force training, road building, etc., and also to keep an operation running where the social benefits accruing from a continued operation outweigh the financial losses. A loan would normally be thought of as a way of raising necessary capital for the operation of a business venture, be it a high-risk operation or not. Indian Affairs, however, seems reluctant to operate under these premises and prefers, as described in the case above, to relate the question of loans or grants to whether an operation can be considered a high risk or not. It is thus possible to minimize the number of "bad loans." At the same time,

grants are diverted from what is generally conceived of as their purpose, into financing of high-risk ventures. The example set by Indian Affairs will hardly contribute to foster a "business-like" attitude among entrepreneurs on the reserves.)

Other matters, such as a trip to Ottawa by Fort Alexander Chief and Council and others, letters, memos, meetings, and proposals relating to the Fort Alexander Band's attempt to go into wild rice paddy developments have not been discussed or mentioned above. The rough outline that has been presented does, however, provide enough material to make it seriously questionable whether the band will have the opportunity to participate in paddy developments.

Conclusions from the History of the "Commercially Sized" Paddy in Fort Alexander

Most Indian bands have very limited funds of their own and are therefore forced to rely on outside sources. The private sector is for reasons given above no alternative to governmental sources. Although the province, in the case described, exhibited a flexible approach, the governmental involvement as a whole showed some disturbing features.

Prominent in the interaction of governmental agencies is their very complex, time-consuming, and uncoordinated operational pattern. Illustrative of this statement were the bureaucratic gymnastics occasioned by the first loan application from the Fort Alexander Band in the fall of 1971; the possibility that a loan

from Indian Affairs, a federal department, would prejudice an approval from ARDA, a federal-provincial agency, is given as one reason why Indian Affairs refused to give a loan. Furthermore, the conditions suggested by the Department of Justice to Indian Affairs in December, 1971, in effect amounted to a proposition that the Fort Alexander Band was to have no board member. This is hardly commensurate with Indian Affair's policies, under which Indian involvement and Indian responsibility are supposed to be overriding objectives.

Another disturbing factor is that while there existed indications (i.e., the report from the accounting firm), that the $130,000 on which the various proposals were based might prove to be insufficient, this does not seem to have influenced the further discussions. The price increases, far from negligible, have not been taken into consideration since the first cost estimates were made almost two years ago. Non-shattering seed, now available but more expensive than the shattering variety, has not been estimated at its present price. These factors all point to one conclusion, namely, that the amount that might be available for an operation of a wild rice paddy development in Fort Alexander, after incredible amounts of preparatory work, will be insufficient.

It is also worth while to observe that at no time were serious considerations given to the possibilities of enlarging the proposed paddy from the minimum commercially viable size of 200 acres to a more viable unit of, for example, 500 acres. Actually, no definite

plans for possible future expansion were ever or are now contemplated.

It can well be suggested that if revised and higher cost estimates had been prepared during the more than two years that the plans for a "commercially-sized paddy in Fort Alexander" were being discussed, these would have triggered new rounds of negotiations, and the day when the paddy could possibly be in operation would be even more distant. The same would have been the case if an increased paddy size or definite plans for future expansion had been suggested.

The above would well serve as an illustration of the difficulties deriving from the ambiguous situation in which those governmental agencies are placed, that are charged with the responsibility of assisting in economic development programs. On the one hand, they have to observe the restraints and demands imposed upon them as governmental agencies. These constraints manifest themselves in time-consuming methods of operation and in the many precautionary measures taken before funds are disbursed. On the other hand, in order to be of real value in the field of economic development such agencies would have to have the freedom that could make it possible for them to be truly attentive to the demands of the projects in which they are involved. That the latter is not the case does not hold promise for the future.

The most important conclusion, however, that can be drawn from a review of the history of the large-scale

paddy development in Fort Alexander, is that the local people have been able to exert a very limited influence over the project. In 1970, the possibility of a commercial paddy in Fort Alexander was discussed at a meeting where no Indian was present, and a decision was reached to the effect that an Indian Affairs official was to get the Band's approval before starting engineering and construction work on an experimental paddy. More than two years later, a plan for the organization of the commercial paddy development was presented, which in effect amounted to a proposition in which the Fort Alexander Band would have no effective representation on the board of directors.

Local responsibility and Indian involvement are often presented as overriding concerns in the activities of Indian Affairs. However laudable, these goals cannot be said to have made the slightest impression on the process that up to the present has produced voluminous files, a little bit of dyke construction ("we got hell for that"), and not much more.

WIDER IMPLICATIONS FOR THE FUTURE

Even if the Indians get the opportunity to enter into a sophisticated wild rice enterprise (which must happen if the Indians are to be in any way related to future wild rice production) it can well be asked what this signifies for the Indian population as a whole. That the developments in wild rice production will

eliminate one of the major social events on many reserves, and a very important one indeed, is obvious. One of the opportunities for Indians away from the reserve to re-establish their relationships with friends and relatives will disappear. The loss of these opportunities could serve to reduce even further the willingness of Indians to move away from their reserves. (Irrespective of whether the onlooker finds this possibility good or bad, it is worth pointing out that "out-migration" is an implicit goal in many of Indian Affairs' programs.)

The developments in wild rice also mean that a sizable number of Indians will no longer receive the substantial revenue that wild rice picking provides, and it will be very difficult to obtain extra cash for urgent capital expenditures. Many Indians' reliance on welfare assistance will increase and the increase in welfare payments (often cut off during the wild rice season) represents an added cost the government will have to absorb.

For the majority of Indians, the conception that economic development programs as they are presently administered are not beneficial to the Indians and also are contrary to what many consider "Indianness" will receive further confirmation, and their reluctance to participate in further programs will increase. That the Indians' present situation is deplorable, in that a majority are temporary laborers in a wide range of activities, goes without saying. The removal of wild rice picking, a truly "Indian" thing in many Indians' opinion, does, however, not represent "progress."

CONCLUDING REMARKS

The discussion above has been summarized in the accompanying table; the content is divided into ecological, social, and economic variables, and a summary is given of the events that made one phase blend into the next. It must be observed that these phases are not clear-cut, well-delineated stages, but rather patterns which merge into each other. However, it is possible to see that the outcome for the Indian people of the shift from any of the phases to the next can be stated in certain general terms. The history of wild rice as a natural resource is partly the history of how the Indian people have lost control over a natural resource.

It can be seen from the table that the changes in the ecological variable did not become significant until wild rice had become a scarce commodity in the general North American food market. Early capitalization attempts (harvesting machines) failed because they tended to destroy the harvests altogether. The support of major food companies and the use of agricultural techniques developed at the Universities of Minnesota and Manitoba have led to growing rice in artificial stands (paddies) and to improved seed. It can well be said that although the benefits for the Indian people were stressed at the time of the implementation of this agricultural research, what constitutes success of the research program and determines the status of the botanists involved is not the social consequences of their research, but whether they were successful in a field for which they had a long and

TABLE 1

CHANGES IN THE WILD RICE RESOURCE SYSTEM

PERIOD	ECOLOGICAL VARIABLE	SOCIAL VARIABLE	ECONOMIC VARIABLE	REASONS FOR CHANGE
Early Fur Trade	Natural stands, unimproved seed.	Indians picked, processed, and consumed as part of yearly subsistence activities. Slight surplus bartered to early traders.	Local consumption in a subsistence economy.	
Late Fur Trade	Natural stands, unimproved seed.	Indians picked, processed, and consumed, but were also hired to provide wild rice for white establishments, partly for subsistence, partly for pay-offs to Indian trappers.	Local consumption in a mixed subsistence and market economy.	Expanded fur trade led to long-term operations at fur trade posts.
Early Reserve Period	Natural stands, unimproved seed.	Indians picked, processed, and consumed, but surplus selling in nearby white towns, camps, etc., increasingly important.	Local and (growing) non-local consumption; expanding part of yield going to market.	General shortage of cash makes selling of the crop increasingly important for the Indians.
Today's Hand-Picking	Natural stands, unimproved seed.	Indians pick, but do not process or market. Wild rice picking symbolically important for "Indianness."	Commercial crop, mainly distributed through minor outlets.	Scarce supply of wild rice as a luxury item leads to capitalization

		Cash returns very important (economically deprived reserves).		attempts, but due to peculiarities of the wild rice plant, picking (or growing) can not be capitalized. Indian phased out of processing and selling, due to lack of capital for distribution and plant facilities, etc.
Today's Paddy Production	Unimproved seed, artificial stands.	Indian co-ops attempt to take advantage of the new situation, but organizational structure (tied in with ways of financing), financing, and land acquisition are major obstacles to viable enterprises.	Commercial crop, in a capitalized production, with major food chains involved in marketing.	Obstacles to capitalization of production removed through application of agricultural techniques, developed partly due to stimulation by major food industries.
Future Paddy Production	Improved seed, artificial stands.	No Indian pickers and few (any?) Indians will benefit from wild rice at all. Financing problems might be prohibitive for any Indian involvement.	Commercial crop, in a heavily capitalized production. Market dominated by major food chains.	Improved seed found through research for the benefit of the Indian people, stimulated by the interest from major food chains.

specialized training, successful in changing the natural ecology and properties of the wild rice plant.

The social and economic variables, here discussed together, reflect the transition of wild rice as part of a subsistence economy to a commercial crop in heavily capitalized production, processing, and marketing. In each phase of this development the Indian involvement is further reduced. In the first phases the Indians bargained with parts of their harvest in exchange for other commodities. With the emergence of wild rice as a luxury item, processing and distribution moved to non-Indian hands, but due to the peculiarities of the wild rice plant the Indians continued as harvesters, and wild rice picking, a "traditional pursuit," became increasingly important as a source of cash revenue in economically deprived reserves and as a symbol of the Indian identity. The obvious profits to be derived from a capitalized wild rice production stimulated large food industries to support eventually successful paddy growing and research into seed improvement.

Today, a market is generated for wild rice through national advertising, as a consequence of the realization by major economic interests that profits could be reaped from a large-scale marketing of this commodity. That the new production methods which ensure the necessary supply for such an undertaking will not be beneficial to the Indian people as a whole is obvious.

Those Indians who wish to begin modern wild rice production in paddies find that their very Indianness

determines which organizational and financial forms are available to them. This predetermination relates to the legalistic framework and to the subsequently emerging bureaucratic structures and discriminatory practices arising from the Indian Act. Thus, this piece of legislation has become increasingly important as a determining factor in the relation of Indians to wild rice production.[59]

It is obvious from the presentation given in this paper that the winners in the competition over the natural resource called wild rice were not the earlier utilizers but those who could command the necessary financial and organizational resources.

The history of wild rice is therefore an illustration of how the Indian people have been forced to become what could be, by and large, described as *lumpen-proletariat*—a group of people dissociated from the means of production. That this dissociation is not related to any kind of culturally or otherwise produced inability on the part of the Indians has been demonstrated. Rather, the larger society has forced and produced the alienation of the Indian people from the resource called wild rice. The larger society has, in effect, developed underdevelopment.

FOOTNOTES

[1]Not the nonsensical *Folle Avoire*, as given in A. D. Little (Inc.), *The Feasibility of Paddy Production of Wild Rice in Manitoba.* Report to the Manitoba Department of Commerce and Industry. Cambridge, Massachusetts: Arthur D. Little, Inc., 1968, p. 19.

[2]*Ibid.*, p. 13.

[3]Regarding the "Indian problem," see H. B. Hawthorn, ed., *A Survey of the Contemporary Indians of Canada: A Report on Economic, Political, Educational Needs and Policies.* Ottawa: Indian Affairs Branch, 1966-67, Vol. 1 and 2.

[4]See A. Henry, *Travels and Adventures in Canada and the Indian Territories between the Years 1760 and 1776 ... by Alexander Henry, Fur Trader*, edited by J. Bain. Toronto: George N. Morang & Co. Ltd., 1901.

[5]I owe this expression to A. G. Frank, "The Development of Underdevelopment," *Monthly Review*, September, 1966.

[6]H. Innis, *The Fur Trade in Canada.* Toronto: University of Toronto Press, 1970.

[7]W. Firey, *Man, Mind and Land.* Glencoe, Illinois: The Free Press, 1960, p. 252. It should be pointed out that the natural resource system concept as defined and applied in this article differs slightly from Firey's definition.

[8]For a description, see below and A. E. Jenks, *The Wild Rice Gatherers of the Upper Great Lakes.* Nineteenth Annual Report of the Bureau of American Ethnology, Washington, D.C., Vol. 19, p. 1057 *et passim.*

p. 56 blank

[9]*Loc. cit.*

[10]Little, *op. cit.*, p. 32 *et passim.*

[11]Henry, *op. cit.*, p. 242.

[12]D. Thompson, *David Thompson's Narrative of His Explorations in Western America, 1784-1812*, edited by J. B. Tyrrell. Toronto: The Champlain Society, 1916, p. 274.

[13]*Ibid.*, p. 275.

[14]E. E. Rich, *Hudson's Bay Company, 1670-1870*, Vol. 2. New York: Macmillan Co., 1961, p. 180.

[15]H. Hickerson, *Land Tenure of the Rainy Lake Chippewa at the Beginning of the Nineteenth Century.* Smithsonian Contributions to Anthropology, Washington, D.C., 1967, Vol. 2, No. 4, p.47.

[16]*Ibid.*, p. 49.

[17]*Ibid.*, p. 52.

[18]P. Kane, *Wanderings of an Artist among the Indians of North America.* Toronto: The Radisson Society of Canada Ltd., 1925, p. 313.

[19]H. Y. Hind, *Narrative of the Canadian Red River Exploring Expedition and of the Assiniboine and Saskatchewan Exploring Expedition of 1850.* Edmonton: Hurtig Publishers, 1971, p. 118 *et passim.*

[20]Rich, *op. cit.*, p. 179.

[21]H. Hickerson, *Land Tenure of the Rainy Lake Chippewa...*, p. 42.

[22]See R. W. Dunning, *Social and Economic Change among the Northern Ojibwas.* Toronto: University of Toronto Press, 1959.

[23]Cf. H. Hickerson, *The Southwestern Chippewa: An Ethnohistorical Study*. American Anthropological Association, Menasha, Wisconsin, 1967, Memoir No. 92.

[24]The above is based primarily on field notes. H. B. Bees, "Booming Wild Rice," *The Tribune*, Winnipeg, October 1, 1928, and T. Lloyd, "Wild Rice in Canada," *Canadian Geographical Journal*, November, 1939. Vol. 19, pp. 288-99.

[25]This and the following correspondence can be found in PAC, RG10, Black Series, File 15,794.

[26]Interestingly enough, initiatives were undertaken to transport wild rice to Europe during the nineteenth century. Jenks relates that attempts were made to grow wild rice in Lincolnshire, England, "with the intention of popularizing it as a food for the poor, but it failed." (Jenks, *op. cit.*, p. 1037.)

[27]Bees, *op. cit.*, *passim*.

[28]Little, *op cit.*, p. 32.

[29]It should be noted that in this provincial legislation treaty and non-treaty Indians have the same privileges.

[30]Considering the hostilities expressed towards the Manitoba Indian Wild Rice Producers' Co-operative by the people who have lost their leases, it is doubtful indeed, whether the Indian people (before they reached their present political strength) would have had any chance to get leases, irrespective of whether they had had the necessary capital.

[31]This is based on the number of harvesters accounted for by the Manitoba Indian Wild Rice Producers' Co-operative Ltd., with additions for Indians working in other leaseholders' locations.

[32]"Luxury Food Item – With a Wild Price," *Business Week*, September 18, 1965, p. 33.

[33]Cf. E. R. Brooks, "An Introduction to the Changing Wild Rice Industry." Talk given to the Co-operative and Credit Union Branch, Department of Agriculture, Manitoba, 1970, pp. 3-4.

[34]*Ibid.*, p. 3.

[35]*Loc. cit.*

[36]Little, *op. cit.*, p. 5.

[37]*An Introductory Plan for the Development of the Wild Rice Industry in Manitoba.* Manitoba Department of Mines and Natural Resources, Project Development and Economic Branch, 1969, p. ii; cf. E. R. Brooks, "Starting Wild Rice Paddies for Manitoba Indians." Report to the Canadian Department of Indian Affairs and Northern Development and the Manitoba Department of Mines and Natural Resources, 1970.

[38]*A Proposal for Paddy Developments by Manitoba Indians.* Manitoba Indian Wild Rice Producers' Co-operative, Ltd., 1971.

[39]Little, *op. cit.*, p. 5.

[40]A very worth-while critical discussion of co-operatives as vehicles for community change in the Canadian North can be found in G. Fields and G. Sigurdson, *Northern Co-operatives as a Strategy for Community Change: The Case of Fort Resolution.* University of Manitoba, Center for Settlement Studies, Winnipeg, 1972, Series 2, Research Report No. 9.

[41]J. M. Stewart, "Interim Report of the Wild Rice Paddy Project at Fort Alexander." Winnipeg, 1970 (mimeo).

[42]*Ibid.*, p. 7.

[43]It should be mentioned that the Indians who worked directly with this botanist found him easy to get along with and commended him for not having "hang-ups" about Indians.

[44]"Wild Rice at Fisher River," *Interlake Flyer*, September 24, 1971.

[45]Although some attempts have been made to facilitate means whereby the Department can assist individuals who want to start businesses, Indians generally tend to hold that the Department is utterly unresponsive when it comes to financing of business ventures.

[46]This theme will be further explored in a forthcoming paper about political processes on Indian reserves.

[47]The Communities Economic Development Fund is a recent provincial creation, the aim of which is to give loans to individuals and companies operating under conditions which make it difficult to obtain financing through the private sector. What impact CEDF will have is hard to guess. However, a substantial part of their loans thus far has gone to Indians.

[48]See Brooks, "Changing Wild Rice Industry," p. 4, and other sources.

[49]See Little, *op. cit.*, p. 25 *et passim*.

[50]Brooks, "Changing Wild Rice Industry," p. 5.

[51]See above, Stewart, *op. cit.*, and other sources.

[52]Little, *op. cit.*, p. 71.

[53]*A Proposal for Paddy Developments*, p. 5.

[54]Reserve land is inalienable from the reserve, and can, except for very special cases, only be sold between members of the band to which the reserve belongs. Thus, it cannot be mortgaged.

[55]For a good description of this kind of involvement, see Fields and Sigurdson, *op. cit.*, *passim*.

[56]PFRA, Prairie Farm Rehabilitation Administration, is an entity under the Department of Regional Economic Expansion that provides various services related to agriculture in the prairie provinces.

[57]ARDA, with a statutory authority in the Agriculture and Rural Development Act, made it possible for the federal and provincial governments to join in agreements where the federal government provides the funds for the development of depressed areas, while the provinces are supposed to identify needs and remedies and have a close involvement in the implementations. ARDA III B is an agreement that supposedly will particularly help people of native ancestry in Manitoba. In a telex, February 21, 1973, to Prime Minister Trudeau, the Premier of Manitoba, Ed Schreyer, commented on the ARDA III B, that, "Thus far, it just does not have any meaning and does not give financial support for natural resource development by native communities and groups."
For an interesting description of the background and workings of ARDA up to 1968, see T. N. Brewis, *Regional Economic Policies in Canada*. Toronto: Macmillan Co. of Canada Ltd., 1969.

[58]Bill 17, now an act, was when introduced by the "socialist" New Democratic Party government in Manitoba criticized as being a piece of radical socialist legislation. The intent of the act is to give the province, through part ownership, a possibility of assisting in future natural resource exploitation in the province.

[59]R. W. Dunning, "Some Aspects of Governmental Indian Policy and Administration," *Anthropologica*, 1962, Vol. 4, No. 2, pp. 209-31. Contains a pertinent discussion of policies and bureaucracies affecting the Indian people.

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